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JUNE, 1930

COTTON

THE TEXTILE MANUFACTURING JOURNAL

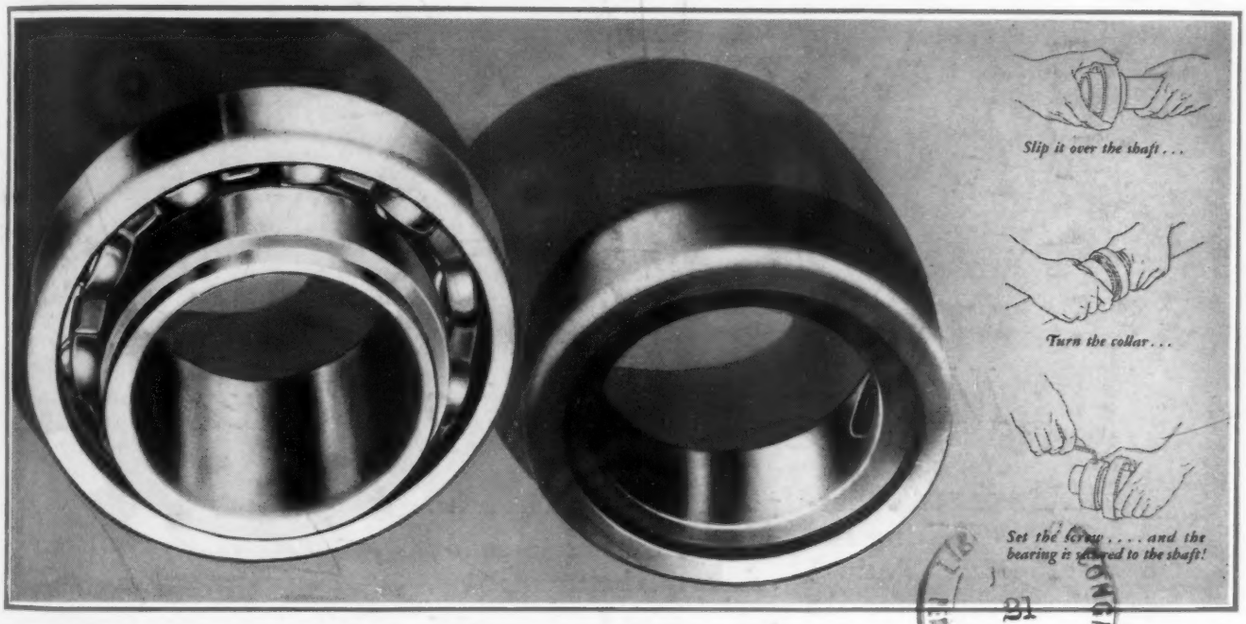

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Table of Contents, Page 45.

KNITTING SECTION, Page 971

Advertisers' Index, Page 182.

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Contents

General and Technical—

Cotton Common Sense, by Fred W. Shibley ---- 889
The Predestination of a Baptist ---- 892
Valuable Meeting at Pinehurst (American Cotton Manufacturers Association ---- 895
Helpful Discussions at Boston (National Association of Cotton Manufacturers) ---- 901
Interesting Show at Boston ---- 906
The Federal Farm Board and the Cotton Situation ---- 908
Pictorial History of Textile Machinery (Part VI) ---- 944
Textile Booklets Worth Writing for ---- 940

Current Topics—

Talk of the Month ---- 916
What the Southern Mills are Doing ---- 917
Cotton Comment ---- 918
New England Mill Situation ---- 919
New Textile Equipment and Publications ---- 920
News Items with a Textile Slant ---- 928
Notes About Men You Know ---- 932
An Old-Timer Says ---- 935

How Other Men Manage—

A Question on Denims ---- 937
More on Slashing and Weaving Broadcloths 937
A Delayed Reply to "Old-Timer" ---- 941
How Do You Control Bad Work from the Card Room? ---- 945
How to Prevent Good Waste Going in Dust Room ---- 945
Men and Their Methods ---- 945
Break Draft ---- 949
Replies to Questions on Spinning and Carding ---- 949
More Comments on Ring Sizes for 50s ---- 955

Knitting Section—

Knitting Week in Philadelphia is Successful Occasion ---- 973
Mettler Discusses Seamless Industry ---- 973
The Future of the Full-Fashioned Business ---- 979
Durene Association Holds Educational Meeting ---- 985
Knitting Arts Exhibition ---- 987
Causes of Loading Up in Narrowing ---- 989
Sleaziness—and Preparing Silk ---- 989
Preventing Holes in Welt on Ribber Half-Hose Tops ---- 991
A Method of Straightening Needles ---- 992
Keeping the Cylinder Down ---- 992
Magnetized Knitting Needles ---- 995
Causes of Stiff and Starchy Silk ---- 998
The Knit Goods Market ---- 1001
New Numbers of Hosiery Guild ---- 1003
Full-Fashioned Group Elects ---- 1007
Letters from an Old Knitter to His Son ---- 1009
Among the Knitting Mills ---- 1011
The Yarn Market ---- 1012

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COTTON

Vol. 94 June, 1930 No. 8

Cotton Common Sense

By Fred W. Shibley

Vice-Pres., Bankers Trust Co.

IN H. R. FITZGERALD'S characterization of this address as a forceful presentation of the industry's problems, we heartily concur. Mr. Shibley, author of "The New Way to Net Profits," a banker of national repute, showed in this discussion, presented at the Pinehurst meeting of cotton manufacturers, a clear conception of the industry's conditions. While largely endorsing the ideals and recommendations of the industry's leaders, he gives to such endorsement the weight of a banker's viewpoint, and it is urged that every manufacturer read and study his remarks with care.—THE EDITOR.

TO THE AVERAGE manufacturer of cotton fabrics it seems almost impossible to make a satisfactory profit in the industry. The way is beset with hazards of many kinds and his problems are perplexing and discouraging, problems of sales agents, of labor, of cotton purchasing, of mechanical processes, of quality and style, of costs systems which never seem to check with the operating statement, and most vexing of all, the problem of how to get a decent price for the product. Naturally, he becomes obsessed with the idea that the cotton industry is going to the bad.

The fact is that the trouble is not with cotton or cotton textile fabrics. The industry is not to blame. It is one of the greatest in this country. This fact was made very clear to me when I analyzed the statistics which were placed at my disposal within the past month by Mr. Sloan and Mr. Halstead of the Cotton Textile Institute while I was preparing this address.

Endorses Institute.

It affords me great pleasure to report at this point that your Cotton Textile Institute was a revelation of efficiency and earnest enthusiasm. I had known little of its practical operations except what I read in the papers. But when Mr. Sloan invited me to visit the offices of the Institute a few weeks ago and review the work in which he and his associates were engaged, I discovered that a vital force was actively in operation in the interests of the cotton textile industry. I was amazed at what had been accomplished in the brief period during which the Institute had been in existence and, as I talked with the earnest men I met there, I was inspired to rebuild my confidence in the good old industry I had been interested in for so many years. The Cotton-Textile Institute deserves that you should get behind the efforts of its officers and give a friendly push.

No, the cotton textile industry is by no means moribund. Cotton is still very much a king. Just at present, however, the timer of the cotton textile engine is out of adjustment and you cannot get the proper speed no matter how hard you step on the gas.

In the year 1929, which was so unsatisfactory to many of you in the way of profits, over 7,000,000 bales of cotton were consumed in the manufacture of textile fabrics in this country. The consumption of cotton fabrics was some 7,971,000,000 yards, an increase of about 2,300,000,000 yards within the last ten years. Consumption in yards per capita had increased from 54 yards in 1919 to 65 yards in 1929.

This is a colossal business and one would have a poor opinion indeed of the ability of the cotton manufacturers and merchants of this country who would entertain the belief that the cotton industry, from raw material to consumption, cannot be made a profitable investment for capital and a generous employer of labor, once you good people get to thinking right.

Nevertheless, at the present moment and for some years past, the industry has been floundering about in a condition of chaos. It demands co-ordination and a co-ordinator. Its unorganized forces must be harnessed and controlled.

If the inquirer asks the man in the street what is the matter with the cotton textile industry, he will receive the invariable reply—overproduction, excess merchandise, low prices.

In the face of this trite reply, Mr. Paul B. Halstead, secretary of The Cotton-Textile Institute, who lives with the statistics relating to cotton goods, tells me he is convinced that, owing to the drastic reduction of cotton goods in hands of wholesalers and retailers within the last three years, the inference is plain that more cotton fabrics had been consumed in this period than had been produced. The trouble exists, apparently, not in the total yearly production as compared with the total annual consumption, but in the fact that no scientific co-ordination exists on a weekly, or even a monthly basis between production and consumer demand. The law of supply and demand is not working properly because it is not balanced. As was stated, the timer is out of adjustment. If, perchance, supply and demand, by sheer luck, come into balance in a purchasing period, manufacturers immediately believe good times are coming and start up ad-

ditional looms or put on a night shift. Demand is glutted, balance is destroyed, and prices fall below previous level.

Statistics compiled beginning in the fall of 1925 and brought up to date, show almost without exception that the margin as between the cost of cotton and the sales price of the product available to the manufacturer, has fluctuated directly with stocks on hand; when stocks have piled up, margins have fallen off, and vice versa. As a general rule, stocks have accumulated in the early months of the year and margins have decreased during these months. In the fall, when stocks have been reduced, margins have almost invariably improved. The natural deduction is that the industry has not yet found proper means of co-ordinating its production with sales.

Bringing this matter nearer home, the statistics reveal that during the fall of 1929 stocks were reduced to a relatively low figure and margins were higher than for several years. With the general decline in business during the last two months of 1929, and the early months of 1930, stocks have been built up and margins have fallen off. Hence the present unsatisfactory condition.

> "IF the inquirer asks the man in the street what is the matter with the cotton-textile industry, he will receive the invariable reply—over-production, excess merchandise, low prices." Yet, "owing to the drastic reduction of cotton goods in the hands of wholesalers and retailers within the last three years, the inference is plain that more cotton fabrics had been consumed in this period than had been produced. * * * The trouble exists, apparently, not in the total yearly production as compared with the total annual consumption, but in the fact that no scientific co-ordination exists on a weekly, or even a monthly basis between production and consumer demand. The law of supply and demand is not working properly because it is not balanced. If, perchance, supply and demand, by sheer luck, come into balance in a purchasing period, manufacturers immediately believe good times are coming and start up additional looms and put on a night shift. Demand is glutted, balance is destroyed, and prices fall below previous levels."

Who killed the goose which laid the golden egg?

In the name of all that is reasonable, please do not lay it to the industry! God knows the law of supply and demand will balance if only it is given a fair chance.

It begins to look, therefore, from the viewpoint of a friendly observer, as if certain human beings engaged in the production and merchandising of cotton fabrics, were directly to blame for this unbalanced and chaotic condition.

If uneconomic practices, like microbes of disease, have crept into the industry, if buyers have become shrewder and more powerful than sellers, if rayon and silk have displaced cotton in some degree in women's wear, our good friends referred to are to blame for letting trade conditions get beyond their control, for keeping markets flooded with excess and distressed merchandise, and for not keeping ahead of the times in matters of distribution and style.

Don't let us be mealy-mouthed about this matter. Let us confess to the truth. We bankers were just as ignorant of the rapid changes that were taking place in methods of merchandising and markets as you were. We saw the mail order house and the chain store rise into prominence. We saw with regret the serious trouble which confronted our good friends, the wholesale merchants; we heard the grumbling of the Worth Street sales agents and the rumblings of change in markets made inevitable by the sweeping advance of the automobile industry and the flexibility of railway transportation; we observed the rapid development of the cotton textile industry in the southern states and were delighted with the progress of the new south. The truth is, however, that we didn't see further than the ends of our noses. And you folks who went on building mill after mill, piling bricks and mortar upon bricks and mortar without looking into the future and forecasting its probabilities until prices began to fall and profit margins to disappear, you too were living in a fool's paradise for a time, as we were who were lending money to assist in this uneconomic expansion, and both of us were doing our best to kill the aforesaid cotton goose that had laid golden eggs for so many years in the past.

No wonder that bankers have been discouraged with the industry and that you manufacturers have been discouraged. But all the time the industry has not been to blame. We alone have been culpable. So let us confess our past sins and firmly resolve to act in the future like intelligent social human beings. Let us take hold of this cotton textile industry which has run off the economic track and replace it securely upon the track and let us keep it there by maintaining a system of control and balance between production and market requirements.

It is true that the cotton mill, equipped with modern machinery and well manager, is very efficient. Its costs are extremely low. No one has much complaint to make of the average mill manager as a manufacturer.

Certainly it is not a question of the industry as such or mechanical processes as such. Even a superficial diagnosis of the case reveals it is to be one of merchandising, marketing and operating control.

Furthermore, no one need worry about the spindles and looms there are in this country available for the manufacture of cotton fabrics. They have been bought and, I hope, paid for. That cannot be undone. But there is no law of God or man that requires the greater part of these spindles and looms to be run night and day and even over the noon hour.

Based on a year's operations, the actual total difference between production and consumption of cotton fabrics is at worst only a small percentage in favor of the former, a huge total in terms of yards and pounds which nobody wants except at bargain prices, but a mere minor fraction when compared with the total which people do want and for which they are willing to pay a fair price.

In my opinion the minimizing of operations so that production shall balance with consumer demand is the one step forward you must make if you are going to get your industry on a better basis. But you must always keep permanently in mind the fact that co-operation is of value from an economic standpoint only in so far as it serves to iron out the sharp peaks and depressions in the production schedule through the year, thus effecting stabilization in machine hours of

operation.

If it tends toward controlling sales prices on any other basis than that established by the flexible law of supply and demand, it is uneconomic and can never effect a permanently profitable result.

What is requisite in any industry is a fair price established on a basis of production supply balanced with consumer requirement. Every commodity has its relative market value. It is as uneconomic, therefore, to raise prices through decreasing production below the level of current demand as to encourage abnormally low prices by crowding upon the market an excess production.

Curtailment of production to balance it with consumption must be spread over the year in order to be economic or effective. It should not be spasmodic. If it is you will find yourselves in a condition of peaks and depression, notoriously uneconomic. Drastic curtailment is evidence of an unhealthy industrial condition; co-operative acting and thinking within the industry is the only way to avoid it.

The science of modern industry is to efect stabilizatifon in the flow of materials from the primary raw stage to ultimate consumption. Such a stabilization is in the interests of both seller and buyer and most decidedly in the interests of capital and labor. Labor to be fairly remunerated demands stabilization in its hours of employment through the year. It too requires that the peaks and valleys be ironed out of its yearly schedule.

I am familiar with no industry in which the human element is of such outstanding importance. The textile manufacturer is in greater part a product of tradition. Inherited tendencies are prominent in his personality. In too many instances he is governed by tradition and heredity. It is exactly the same in the silk and wool industries as in cotton.

Let us say, by way of illustration, that it has been considered highly desirable to group in one corporate enterprise the larger mills producing broad sheetings. We study exhaustively all the facts in the case and decide in mutual agreement with the controlling executives of each mill that economies could be effected through market stabilization, better merchandising and distributing practices that would greatly increase profits in the broad sheeting business.

Then we come to the question of terms or basis of merger. Which in your opinion would weigh more, the economic factors, or the human factors, in the ultimate decision? I know because I have tried and failed several times, in the good old days before I became a banker, to effect an economic merger in a branch of the cotton industry, simply for the reason that certain executives would not consent to drink when brought to the fountain. They declined stubbornly to divest themselves of authority for the general good and even for their own profit.

Therefore, in considering not only the possibilities of co-operation but of consolidation, I advise that you choose at first the easier way. The cotton mill executive must come first to an appreciation of the benefits of co-operation before he will recognize the economic value of consolidation.

Co-operation is distinctly a social movement. Co-operation requires the subordination of selfish instincts to intelligent decisions. It demands action based on confidence rather than upon fear. Man is by nature opposed to co-operation. He is, scientifically speaking, an unco-ordinated life force. The cotton manufacturers in this country at the present time are literally unco-ordinated industrial forces, each acting on his individual initiative, very much like the molecules in a gas. It is the business of economics to co-ordinate these forces and get them working together harmoniously in co-operation. No one recognizes the difficulty of this accomplishment more than I do. But it is so well worth while and the time is so ripe for it, that I urge that you give co-operation your earnest consideration.

I believe that the desirable ultimate of the cotton textile industry is to be attained through the consolidation into definite groups of mills representing specific lines of merchandise such as print cloths, sheetings, denims, ducks, yarns, etc., with skilled market and merchandising research departments, and above all, governed by systems of financial and operating control.

I believe as strongly, however, that the present is not a time propitious for such mergers. The profits are not such as to attract bankers or investors if invited into the situation. Without banking co-operation it would be extremely difficult to effect such mergers. It is required, therefore, in order to restore the industry to a profitable basis where it may invite rather than solicit banking support, that a co-ordination of production and sales shall be effected and maintained over a reasonable period, thus stabilizing prices.

Granted a balance maintained through co-operation between production and consumption with a consequent price stabilization, an opportunity is at once available for installing a system of scientific administration such as I outlined in my recent book, *"The New Way to Net Profits."*

When I discussed with several of my manufacturer friends here in the south the subject of this address, they told me to explain how such a system could be applied successfully to the cotton manufacturing business.

As certain of you know, the system is in no way original with us, being the method of research, analysis, forecasting, planning, and control now applied so effectively by the great money making industries of this country and by many small enterprises relatively

(*Continued on page* 894.)

Textile Profits in 1929

IN the manuscript of his Pinehurst address, Mr. Shibley included the following paragraph: "Mr. E. G. Field, in the March 1930 issue of COTTON, reports the earnings of twelve prominent cotton mills ending their fiscal years, at various periods in 1929. The average net profits for the fiscal year were $8.42 on each $100 of net worth. Four mills reported earnings well above the average, the best being $11.11. Eight mills reported below the average, two showing losses, the worst being $17.94, a very bad condition indeed. All of these twelve mills operated in the same industry."

The Predestination of a Baptist

IN THE graduating class of 1896, at Furman University in Greenville, S. C., was a promising young man whose plans were that this event was to be the entrance into a life of teaching, of directing groups of young men in a cultural and literary atmosphere. In truth, following the commencement exercises where this young man had delivered the class oration and had been graduated, it was announced that he had been elected to the faculty of Furman, the institution where he had so thoroughly enjoyed the final shaping of the foundation of his training. With eager spirit he felt that truly his career was beginning.

But destiny, or fate, often rules contrary to the plans of men, and such an intangible influence usually comes with the significance of predestination. This young man had been accompanied to the exercises of the evening by Colonel James L. Orr, a true pioneer in the pioneer days of textile manufacturing in the South, and one of South Carolina's noble and stalwart sons. Colonel Orr had been following the early career of this young man, in fact, the young man had performed most satisfactorily some work for the Colonel, work of an important, though apparently routine character. So the Colonel, with that keen insight and directness which were his, had had opportunity to sense hidden business powers which he felt were latent in the lad, and on the way home, he asked the boy to come to his office the next day, and there asked of his life plans. The boy, then as now an admirer of the Colonel, eagerly agreed thus to discuss his future.

The lad enthusiastically unfolded his aspirations and hopes for a career in the world of education. Colonel Orr was unimpressed. Fully cognizant of the possibilities then existing in the industry which he helped to pioneer, he told the boy that his own ambition for him was that he might choose as his career a part in the building of this great industry. Still reckoning without the seeming destiny which was eventually to shape his life, the embryonic educator remained true to his first love.

It was well along in his teaching career that this destiny which was to thwart his plans made its definite impress upon the young professor. During his first years of teaching at Furman, the young man had resided with an older brother who was in active charge of several cotton mills. Between these brothers there was a beautiful relationship of understanding, and love, and admiration, though their chosen professions were apparently unrelated. And while the young tutor's dreams and thoughts were probably with the romanticists and classicists, his residence in the home of a cotton mill man unquestionably caused him to absorb some of the fundamental principles of that business. This influence unquestionably found fallow ground in him, too, because of the potential business possibilities which the Colonel had divined in him.

On a Sunday morning in 1911, the young professor, who had now married and established his own home, was preparing to go to the Sunday-School class of which he was the teacher, when he was called to the home of his elder brother. Arriving there, his brother told him that physicians had ordered his temporary retirement from the management of his mills, because of ailing health; but that he could not make the fight unless his younger brother took charge of the properties during his absence.

The younger man, quickly sensing the situation, out of his abiding love for his brother, consented at once, with a characteristic definiteness to be revealed more clearly later.

He asked how soon his brother wished him to take charge, and was in turned asked how soon he could be ready. He characteristically replied that he could start the next day, and so he did, relinquishing the anticipated career as a teacher, and becoming a cotton mill man.

Thus it was that Bennette Eugene Geer, who was the young professor in this story, entered the industry to which he has contributed so much, and from which he has just received the highest honor within the power of his fellow southern cotton manufacturers, as a body, to bestow—the presidency of the American Cotton Manufacturers Association.

And thus materialized the destiny for him, the influence of the pioneer Colonel, and of the beloved elder brother, the late John M. Geer, to whose position in operating a group of mills at Easley, S. C., Ben Geer temporarily succeeded as his first position in the textile industry.

After about two years at Easley, to which John later returned, following his illness, Ben was selected to assume charge of the Judson Mills (then the Westervelt) in Greenville in 1913, just as this plant was being organized for fine goods, as one of the pioneer plants in the South on this class of work. His con-

nection with this plant has been continuous since, and during the years when it was made a demonstration that fine goods could be successfully manufactured in the South, and its subsequent expansion and development into still more fancy and intricate products, he has been its directing head. He is now treasurer of Judson Mills, and this represents practically his single business activity. In 1919, upon the death of his brother, John M. Geer, he became president and treasurer of the Easley Cotton Mills, having charge of these mills also until the fall of 1920.

Since these sketches involve a brief biography, it may be interpolated here, for record, that Ben was born on June 9th, 1873, in Anderson County, S. C., growing up on a farm there, just as a normal boy, with no particular sports or diversions. He attended Oldfield School at a church near his home in Anderson County, later Belton High School, and holds B. A. and M. A. degrees from Furman University. He has no club affiliations. In college his fraternity was the Sigma Alpha Epsilon. He is one of the trustees of the Duke Endowment. For practically his entire life he has been a devoted member of the Baptist Church.

On December 20th, 1900, Ben was married to Miss Rena McGee Rice, who, through her influence and encouragement, has been his chief inspiration. Six children have blessed their union: Sarah Geer Dale, John M. Geer, Rachel Rice Geer, Robert A. Geer, Bennette E. Geer, Jr., and Bradshaw Geer.

After this record of the man, it is now proper for this sketch to consider more particularly the man himself, his habits and characteristics.

In the first place, investigation reveals that Geer has no especial hobbies. At Caesar's Head, on a mountain near Greenville, he maintains a "second home," where most of his week-ends are spent, in company with Mrs. Geer. An inherent lover of nature, in all of its aspects, he finds here opportunity for unrestrained communion with things beautiful which he loves, and association with natural mountain people, unveneered with the artificialities of life. Here he can indulge in strolls through the woods, in meditation, reading and thought; his credo, in fact, might be put in the words of his favorite poet, Wordsworth:

> Oh, there is blessing in this gentle breeze,
> A visitant that while it fans my cheek,
> Doth seem half-conscious of the joy it brings
> From the green fields and from yon azure sky."

The choice of such a form of recreation is typical of the man, an index to him. Quiet, unassuming, his relationships are simple and direct; his activities, though thoroughly effective, are devoid of blatant blast—a perfectly natural man, to whom the realities of nature, full of joyful life and peace, appeal.

During a recent interview, the fact was mentioned that in the average conception there is a wide gulf between the field of endeavor from which Geer came, the class room, and that into which he entered, the textile industrial field. Certain questions presented themselves: were the people different? Was it necessary to re-adjust the methods used in instructing young collegians, when dealing with masses in the mill business, when traveling the roads of commerce?

It was interesting to secure his reply: that there is no difference, that fundamental principles apply to people, in whatever sphere. Further, since literature in its highest forms is nothing more than the philosophy of human life, he feels that he is a better cotton mill executive because he has read Shakespeare, for example; that a literary background gives an interpretation of man which provides a broader view with which to look into the heart of a man, be he academic or industrial.

Geer's success with Judson Mills has already been indicated. This occupies most of his time —too much, say friends who feel that his thoroughness and interest prevent sufficient recreation for him. But his interests are wide, particularly along the lines of education, and religious and community activities. Usually in the background, not prominent in the spotlight—but always there to be depended upon for clear and sound advice and active support. So do civic associates describe him.

In his dealings with his fellow-man, perhaps Geer's outstanding trait is his intensely broad sympathy and understanding, his ability to consider a matter calmly, impartially, and to see through it clearly. With an understanding and sympathy which a natural love for humanity begets, he can see the whole situation, and can sum it up with a quiet reasoning and fair judgment. These qualities induce many demands upon his counsel, which he readily gives; and every man in his organization has access to him and his advice.

Comparatively small in stature, with a kindly benevolent expression, and a twinkling eye, which would perhaps seem to indicate the professor more than the popular conception of the industrialist, Geer's presence is one of fine poise, his manner one of gentility. Cordial and gracious in all of his dealings, he is engaging in his pleasant sincerity. In the main, he is a reflection of the grace and poise that come from the essence of his broad, unruffled philosophy, which is that man's function and privilege is to live peaceably with all men.

Men reflect their thoughts in their actions. It was

an expression of Tennyson's that "Graceful tact is the Christian's art,"—and if that statement were dissected, and analyzed, the effect of its thought upon the life of Ben Geer would be revealed in his every day intercourse with his fellow man.

This has been an endeavor to picture something of the man who now heads the American Association. A well-balanced, straight-thinking business man who has not lost the ideals and thoughts of a less strenuous, less confining experience. He will without doubt, for the sake of service, render of his best, in this new responsibility of his, and a peaceful and smooth journey, but one to carry the craft to new and greater ports of achievement, is assured the Association during his administration. He will thoroughly enjoy the privilege of his new duties, and will execute them effectively and gracefully.

And there's one other thing about this new job of his. It was stated that he has no hobbies. It may be necessary to retract that statement somewhat. Geer's duties have always carried him to New York more or less frequently, and up until a few years ago, he disliked to make these trips from Greenville. He's pretty much of a home man, and it was not an easy matter to get him to New York or thereabouts unless necessity required it. For a matter of two years or so, however, his attitude has changed, and his selling house, and the Duke Foundation, and even less definite interests, find him ready to the point of eagerness to come. The explanation is that Miss Barbara Rice Dale, Ben's first grand-daughter, came into the world at about the time of the 1928 convention of the American Association, and, with her parents, resides in New York. If Ben Geer has a hobby, it is unquestionably this young lady. Accordingly, such affairs of the Association as require a visit to that city will undoubtedly be conducted personally by the president. With no more thoroughness than his other duties, to be sure, but with an element of eagerness induced by the circumstances which will thus be self-evident.

Cotton Common-Sense.

(*Continued from page* 891.)

as profitable.

The dominating factor in The New Way to Net Profits is forecasting of sales income based on facts acquired by an exhaustive study of markets and the human beings existing in those markets; based further on a knowledge of the adaptability of the merchandise line to market requirements in points of quality, design, style, color, and preparation, and further fortified by a thorough knowledge of how most economically to distribute the merchandise line in the several markets.

Information as to markets, as to consumer demand, consumer tastes, will flow if it is properly organized up from its source through retailers, wholesalers, cutters-up, converters, and selling agents, to the manufacturer of grey cotton goods in a mill village anywhere here in the south. To organize such valuable information so that one can plan his line of merchandise and forecast his sales in units and prices so as to co-ordinate with the consumer, demands brains, hard work, and everlastingly keeping at it. No mental sluggard can achieve success in modern industry.

But The New Way to Net Profits is not the first aid which the cotton textile industry needs. Old-fashioned human co-operation is what is required this day and hour.

Cooperation means, literally, the act of working together. It means, in certain cases, the subordination of a present advantage to the attainment of a more permanent success. What is required of men so that they shall work together successfully and harmoniously? Faith in their purpose. Confidence in one another. Correct and honest thinking. Absence of fear and suspicion. Perhaps what are needed most are broadmindedness and unselfishness. The attainment of these demands character and intelligence, for only the honorable and understanding man can properly appraise his neighbor's opinion or possess the secret of knowing truly that he who would save his soul must give it for the common good.

The conclusion of the vitally important matter we have been discussing would seem to be this: (a) The ultimate desirable attainment is consolidation by line groups. (b) Consolidation is not attainable without a sustained record of profits. (c) Progress toward this end is not possible without a cooperation that shall coordinate production and consumption. (d) Satisfactory profits can only be attained through such coordination, by improving methods of merchandising and distribution and increasing consumption of cotton goods.

My advice to you, therefore, is to concentrate upon and conclude as quickly as possible the good work that The Cotton-Textile Institute has inaugurated in constantly encouraging manufacturers to keep production in balance with demand. It is my hope that no one of you, because of his individual efficiency and success, shall assume the attitude of the Pharisee who ignored the deplorable condition of his unfortunate brethren and, lifting his eyes to heaven, thanked God he was not as other men are.

Business not only in this country but throughout the world is passing through a period of pronounced depression, suffering an experience in the United States in particular such as human being undergoes after he has eaten heartily for a prolonged period. Consumers seem surfeited with goods.

Is it not well to look these facts in the face and inquire seriously and thoughtfully if it is not plain common sense to meet the threatening situation with a united, rather than a divided front? Even the lower animals cooperate at a time of common danger.

Is it wiser for a cotton manufacturer to grind out his products to the limit of the productive facilities of his plants, knowing that adequate consumer markets do not exist for them if his competitors operate on a similar basis, or to cooperate with his fellow manufacturers and limit production so as to be able to secure a fair price for what is sold?

The facts seem self evident. The question is a simple one. The answer must be furnished by the members of this Association.

Valuable Meeting *at* Pinehurst

American Association Discusses Research, Advertising, Other Topics; Geer New President; Callaway and Gossett Vice-Presidents

A WELL-BALANCED program of constructive and progressive discussions relating to the textile industry's problems, and an unprecedented attendance of interested factors, made the 34th annual convention of the American Cotton Manufacturers Association, held at the Carolina Hotel, Pinehurst, N. C., on Tuesday and Wednesday, May 6th and 7th, a definite contribution to the progress of the industry.

President A. M. Dixon.

Topics of paramount interest and importance to the industry had been selected, and speakers of unquestioned prominence and ability discussed them. Throughout the entire program was a strain of emphasis upon the need for co-operation in the solution of the industry's problems, and the effect in this direction upon the industry's members, as a result of the carefully planned and selected program, was evident.

B. E. Geer, treasurer of the Judson Mills, Greenville, S. C., was elected president of the Association in the executive business session. Cason J. Callaway, of LaGrange, Ga., was elevated to the first vice-presidency, and B. B. Gossett, president, Chadwick-Hoskins Company, Charlotte, N. C., was made second vice-president. W. M. McLaurine was re-elected as secretary-treasurer.

Address of President Dixon

The meeting was opened by President Arthur M. Dixon, of Gastonia, on Tuesday morning. After the preliminaries, Mr. Dixon presented the president's annual address. Leaving the report of the Association's activities to the secretary, Mr. Dixon discussed briefly some of the questions of interest in the industry at the moment. "In preparing what I was going to say to you today," he began, "I was interested to know what had been said to you on similar occasions by former presidents, and I refreshed my memory by looking through some of the annual books of proceedings. Some of the things stressed then are no longer of interest today. On the other hand, there were problems which we had ten and twenty years ago which are still pressing for solution.

"During the war," Mr. Dixon pointed out, "one of the big things toward which we were bending our energies was the increase of our production to supply the abnormal demand. Today we find ourselves in the position of restricting production to conform to demand. Our capacity for production is greater than it has ever been and in addition we have vastly improved the quality of our product. Our great problem today is to dispose of the goods we make. As I see it, there are three avenues open to us in taking care of our production. One is creating new usages for cotton, another is to increase the use of cotton in lines where it is already used. The last lies in increased exports, to those countries where the possibilities are greatest. I of course, appreciate the fact that efforts have been made and are now being made in all these directions, however, I feel that our endeavors should be increased as never before."

"As cotton manufacturers we are necessarily interested in the farm problem," continued Mr. Dixon, "and especially are we interested in the condition of the cotton farmer. If from no other standpoint than a purely selfish one we are interested in seeing the agricultural interests prosper. When the farmer is prosperous, he naturally has more money to spend and this is reflected in increased purchases of cotton goods. Some years back the idea was that the farmer needed cheaper money and easier credit. As a result Farm Loan Banks and other agencies were established to give this aid and what has been the result? Human nature is human nature and the farmer, like the manufacturer, or any one else with money easy to secure and at a cheap rate, proceeded to borrow it. He increased his holdings in land, he bought automobiles and other present day luxuries with the result that today his condition is worse than it was. The farm problem still confronts us and all kinds of remedies for relief have been suggested by so-called friends of the farmer. Many of the schemes suggested have no merit and are merely advanced by political demagogues. There should be a closer co-operation between the farming and manufacturing interests in the South and I think that as an Association and as individual manufacturers we should do everything within our power to aid and assist in putting farming on a profitable basis. I appreciate that more or less work has been done along this line but much remains to be done and

HERE is a symposium of constructive thought. Co-operation, adjustment of production to demand, the need of better staple and character of cotton, research, advertising—all of these and other topics of similar importance and interest were covered at the convention of the American Cotton Manufacturers Association in Pinehurst, reported here.

I urge upon you the necessity of increased effort. Mr. J. P. Gossett, when President of this Association, in his very able address before you at Atlantic City, in 1927, stressed the importance of these things, and what he had to say then is just as true now as it was in 1927. More careful selection of seed, better methods of cultivation and improved ginning and baling mean more money to the farmer and a like benefit to the cotton manufacturers.

"Keeping costs down is essential, but when this is done by producing more goods than the consuming public demands, then it is a shortsighted policy. When over-production takes place the obvious remedy is curtailment. As a consequence we are bound to have irregular employment which is one of the chief banes of the industry. In an effort to correct this situation conferences were conducted by the Cotton Textile Institute, and a number of southern and New England manufacturers have recommended a voluntary adjustment of the working time in the mills. The recommendation as made was that the mills adopt a standard maximum operating schedule of 55 hours per week for the day shift and 50 hours per week for the night shift, with all extra running time to be eliminated. A large number of mills have endorsed the idea and it is hoped and believed in the near future that practically all of the mills will give the plan their endorsement and put it into execution.

C. J. Callaway, Who Was Elected 1st Vice-Pres.

"The Southern Textile Association deserves the approval as well as the cordial support of this Association. The group meetings of the superintendents and overseers in the Southern Textile Association have been productive of good, not only to the men themselves but the mills they represent and to the industry as a whole. Seeing the benefits derived from this organization, the National Association of Cotton Manufacturers a year or so ago was responsible for the creation of just such an association among the superintendents and overseers in New England. In our case, the organization is already formed and has been functioning for years and it does seem that it is as little as we can do to give it our hearty support and insist upon our superintendents and overseers attending the meetings.

"As one of the chief sponsors of the Cotton Textile Institute, the American Cotton Manufacturers Association feels a deep and abiding interest in its welfare and development. Under the able guidance of Walker D. Hines, George A. Sloan and other officials, the Institute has justified the faith of those farseeing manufacturers who brought it into being. This is no place to recount the story of its constantly expanding activities, but it is not amiss for me to state that the present popularity of cottons, in my opinion, is due largely to the wisely directed efforts of those in charge of this particular branch of development. I might state in passing, also, that as a result of its activities not the least benefit that has accrued to the industry, has been the drawing together of manufacturers North and South, with the consequent development of a spirit of understanding and co-operation that has been most helpful and encouraging. For these and other reasons I recommend the continued support of the Institute by those of us who are members, and the sympathetic study and consideration of its aims and plans by those members of the Association who have not yet felt that they could become identified with it.

"There has been a lot of criticism within the past few years of working conditions, hours of labor, and the wage scale in southern cotton mills. This criticism has come from the press, from the pulpit, from some of the faculty members of the educational institutions of the country and from various other sources. Some of it is without justification and too frequently has been made through ignorance and bias on the part of the critic. Personally, I take pride in what we have been able to accomplish. When I look back thirty years ago when I first entered the mill, and compare conditions then with what they are today, I am amazed at the progress that has been made. Do not understand from this that I think that we have attained perfection. We have not, nor will we ever reach that ideal, but I do feel that as an industry we have nothing to be ashamed of and much that we can view with satisfaction. Frequently we are asked if what our critics have said is not true why do we not give our side of the picture. Frankly, gentlemen, I think that question is pertinent. Statements have been made so long that have gone unchallenged that a large part of the public has come to believe them. Nevertheless, in spite of the mass of propaganda directed against the mills, our side of the case has had its champions. Mr. B. B. Gossett at the North Carolina State College, and Mr. Bernard Cone at the University of North Carolina, have helped to stem the tide in recent public addresses with which you are doubtless familiar. Misses Dozier and Potwin have also made notable contributions along this line, as have Mr. W. D. Anderson, Mr. Donald Comer and others."

Following Mr. Dixon's address, the annual report of the secretary was presented by W. M. McLaurine, disclosing a year of unusual activity and constructive work on the part of the secretary and his office. The next feature was an address on "Cotton Commonsense," by Fred W. Shibley, vice-president of the Bankers Trust Company, New York. Because of Mr. Shibley's forceful presentation of the industry's problems, as it was characterized by H. R. Fitzgerald, this address is being reproduced in larger part on page 889 of this issue of COTTON, and readers are urged to study it.

The concluding feature of the morning session, and one of especial interest and importance, was an address by Carl Williams, member of the Federal Farm Board, concerning the board's activities in connection

with the marketing and financing of cotton. This paper, too, is reproduced practically in full elsewhere in this issue, beginning on page 908.

Afternoon Discussion on Cotton, Research and Advertising

The afternoon session on Tuesday was conducted by Cason J. Callaway, and was devoted to a discussion of cotton, research, and advertising. In touching particularly upon advertising, Chairman Callaway declared that a manufacturer or producer should first put merit into his product, then advertise it, and that research is essential in bettering the product.

The first prepared discussion of the afternoon was by Allen F. Johnson, vice-president, Consolidated Textile Corporation, Lynchburg, Va., who discussed the situation as regards cotton staple. Mr. Johnson pointed out that the continued deterioration of the length and character of American cotton is a most serious problem, and one in the correction of which the mills most certainly should assist. He went into detail and presented figures showing the deterioration in both character and staple that has occurred, giving the reasons. He said in part:

Johnson's Talk on Cotton Staple

"What the textile industry is particularly interested in at this time is quality, the quantity being sufficient, with the promise of a rather too large carryover at the end of the season, which equally affects the farmer who still has cotton to sell, and the spinner in the reduced prices of his product. By quality is meant longer and stronger staple and better picking and ginning methods, with improved packing and storage facilities to protect it until it is delivered to the mills. The present difficulty with the farmer is to dispose of his 7/8-inch and shorter cotton, and the present problem of the spinner is to find 15/16 to 1 1/16-inch cotton, of uniform staple, containing a smaller percentage of short and 'wasty' fibers, such cotton now having become scarce.

B. B. Gossett, Who Was Elected 2nd Vice-Pres.

"The prestige of American cotton was built up on quality, and the development of the industry has been one of the greatest romances in history. * * * North Georgia 1-inch and 1 1/16-inch became famous the world over, and our New England spinners were happy and content to buy by naming the grade wanted and specifying North Georgia, and a bill of lading showing a North Georgia station as the shipping point was sufficient guarantee as to staple. Other sections in other states had a similar reputation for quality."

Mr. Johnson stated that this condition existed until three or four decades ago, when a change was noted in the method of buying cotton caused by some variation of the fiber in closely adjoining sections. As to the causes, Mr. Johnson said, no censure should be attached to the farmer, who, led to believe that "cotton was king," and finding a ready market in the increasing number of spindles, planted greater and greater acreage to cotton, increasing production at a time when labor was becoming more costly and less efficient and the land was becoming impoverished and in need of more fertilizer.

The depression of the '90s, the tenant farmer system, the boll weevil, all contributed to a combination of circumstances which made the situation worse, and the farmer, following the lines of least resistance, made the mistake of increasing acreage to increase production, when he should have increased by a greater yield per acre. This, Mr. Johnson pointed out, led to an increased cost of production and a gradual deterioration of staple. He presented figures on the grade and staple of the 1929-1930 crop, showing that 24 per cent of the crop was untenderable on contract. Of the 3,521,000 untenderable bales, 600,800 were untenderable on account of grade, 2,640,000 on account of staple being shorter than 7/8-inch, and 279,300 untenderable on account of both grade and staple.

"While a great deal is said about the percentage of low grades in a crop," said Mr. Johnson, "and the effect these low grades have on the market, the most serious trouble is that 14.3 per cent of the crop of 1928 and 20.1 per cent of the crop of 1929 was 13/16 or shorter. Of the 1929 crop there is left after deducting the untenderable, only 10,994,000 bales of tenderable cotton, or only 75.7 per cent of the total. Of this 10,994,800 bales, 5,212,400 bales, or 35.9 per cent of the tenderable cotton, is 7/8 in staple, leaving only 5,782,400 bales of 15/16 and longer staple. There will always be a demand for 7/8 staple, but the world does not require, and the American farmer cannot afford to produce cotton shorter than 7/8 staple at the price it will bring in the world's market."

Mr. Johnson quoted from Alston H. Garside, showing that production of cotton in foreign countries is rapidly increasing; that India, America's chief competitor for 7/8-inch staple, formerly grew cotton shorter than 7/8-inch, but in recent years have introduced American seed, and are now growing staple 7/8-inch and longer and selling it to spinners who formerly used American staple.

The speaker pointed out that in growing 7/8-inch and shorter staple, therefore, our farmers are competing directly in the world's markets with foreign growths, where because of low cost, etc., the foreign growths have a price differential in their favor.

Mr. Johnson repeated that, "what the spinners of the United States require, and what a large percentage of the foreign spinners require, is an increased amount of 15/16-inch and longer staple cotton, or more particularly, 15/16-inch to 1 1/16-inch staple, which the states originally produced. By planting better varieties of seed, better fertilization and cultivation, the farmer can avoid being placed in competition with India and the rest of the foreign countries." This

goal can be approached by improving the staple over the whole belt, said Mr. Johnson, the western portion of which has had the greatest deterioration. He told of the beginning which has been made, in the way of better seed, intensive cultivation, boll weevil control, etc., through the efforts of men like D. R. Coker, and Harvie Jordan, managing director of the American Cotton Association. Mr. Johnson said that, "Mr. Jordan has the endorsement of our association, and we should give him our individual support as well."

Summing up, Mr. Johnson listed the ways by which the mills can play an important part in helping the farmer, and improving the cotton situation, as follows:

"What part can the mills play in carrying on the work of helping the farmer and improving the staple to its former status?

"First, by aiding financially and in every possible way the distribution of better varieties of seed. Every mill office in the cotton belt should be a distributing depot for the variety of seed recommended by the agricultural colleges and adopted by the farmers of that section. This is important, for if several varieties of seed are planted in the same ginning section the seed will become mixed in ginning.

W. M. McLaurine, Re-elected Secretary.

"Second, to agree with the farmers when the improved seed is planted that a suitable premium will be paid by the mill for the longer staple cotton, which premium should be equal to the premium the farmer receives in the middle section of the belt for an equal staple. The saving will then be mutual, the farmer receiving more for his better staple and the mill saving on freight and possibly the middleman's commission. This is vital to the success of the scheme. While some mills have paid a reasonable premium for staple which the demonstration agents have induced the farmers in a given section to plant, others have not, and have taken in the cotton at the same price as other farmers received for 7/8-inch staple.

"Third, assist in working out improved ginning methods. Considerable progress has been made in opening and cleaning cotton at the mills, but this work should be done by the gins so that the farmer would receive a better price for his off-grade and low-grade cotton. I would suggest that the agricultural department of the government or the Bureau of Standards might be induced to work out a better method of ginning and cleaning.

"Fourth, to lend our efforts to bring about a change in the regulations governing the cotton exchanges so that 15/16-inch staple will be the basis of buying or selling cotton instead of 7/8-inch staple. So long as the basis is on 7/8-inch and the farmer receives the market price based on 7/8-inch he is satisfied, but if 15/16 staple is the basis of price and the farmer is penalized in price for his 7/8-inch cotton, he will change to longer staple varieties."

Research Work in Cotton Manufacturing

R. E. Henry, president of the Dunean Mills, Greenville, S. C., had prepared a discussion of research work, and this was read by proxy in Mr. Henry's absence. The paper follows in part:

"Because of the very nature of its raw material probably cotton manufacturing lends itself less readily to beneficial laboratory research work than any other of the major industries. Yet we do know that the majority of modern mills with progressive managements, have carried on, within their different departments, long studies and constructive experiments leading to greatly increased efficiency of operations, greatly reduced costs of production and a marked improvement in the uniform quality of that particular fabric which the individual mill produces.

"The progress that has been made in cotton mills along these lines has more than once been set forth by capable men within the industry, men who knew the facts and who have fully proven the case.

"Furthermore the changes and improvements along these lines have not stopped.

"Yesterday we discarded from five to ten good warping machines and at great expense replaced them with one high speed warper. Today we discard three perfectly good picking machines and at great expense replace them with one single-process picker. Tomorrow we discard perfectly good weaving equipment and at great expense replace it with automatic weaving machines. Next week perhaps we will discard perfectly good spinning equipment and at great expense replace it with improved spinning frames because the new frames can spin ten per cent faster than the old.

"Why do this? Does it bring about any more regular or continuous operation of mills as a whole? Has it increased the earnings of the industry as a whole? Should it not go far toward doing both? Why have the results not been more satisfactory?

"Perhaps the answer is because of mass production. Mass production has caused keener competition; and keener competition has led us to make these desirable but expensive replacements in order that we, as individual mills, might survive and not go bankrupt.

"And now that we have spent vast sums of money for this new and improved equipment, and have it installed in the mills what is the situation?

"The situation is just as unsatisfactory as before. It is even more unsatisfactory. At the present time probably every hour's operation of the industry as a whole reflects itself in a loss instead of profit; to such an extent is this true that even now the print cloth and narrow sheeting mills are operating only half time.

"Were these mills built and this highly efficient equipment installed for the purpose of standing idle half the time; or rather were they constructed for the purpose of producing a needful commodity and earn-

ing a reasonable profit for the shareholders?

"In the absence of a satisfactory answer to these questions it necessarily follows that in planning our business or in making our calculations, one or more vital factors were left out of the equation.

"If this conclusion be true, it would then appear that the task before us is to ascertain what those missing factors are, and to take them into consideration in our plans and calculations for the future.

"Apparently the procedure seems to have been to build and equip the mill for some specific fabric because that fabric was made by a great many other mills and there was a large market for it. But probably no real survey was made to ascertain whether there was room in the market for additional production of that particular fabric.

"Again, we have seen cotton mills expand either in size or in production, or in both, and continue making the same construction in increased quantities; whereas it was perhaps common knowledge that the looms already making that construction were fully sufficient to supply all market requirements.

"In considering this mill which has increased its particular product, one can only assume that the basic hope is to make the goods at a lesser cost and obtain the needful additional orders by underselling competitors when this becomes necessary.

"The benefits derived from such procedure are generally of short duration because some other mill will probably follow example in both expansion and price reducing and so it goes from bad to worse.

"Would it not be a constructive procedure if the mills, in connection with their selling agents, would make surveys and studies and contracts in the market with their customers in an endeavor to make the character of their fabric suit the needs of specific customers, and toward making for these customers materials that might be used in greater volume.

"It is quite possible that many individual mills have so concentrated their manufacturing efforts upon one or two certain constructions that they are extremely reluctant to make any changes whatsoever. Here again we are retarded because of the practice of mass production.

"We have known mills to decide against making a new construction because it required the buying of new harness, reeds and pick gears; and yet probably those mills would not hesitate to replace other equipment at much greater expense if the replacement indicated a reasonable increase in production, or a lessening of operative costs.

"We have known a mill to decide against changing to a wanted construction because some production would be lost during the change; yet that mill is shutting down half its production today because its standard construction is overproduced.

"It has been successfully contended that the modern cotton mills without question rank upon a high plane in both equipment and efficiency. This seems to be true only so long as we allow the individual mill to run upon its usual specific construction. When it is suggested that the goods could be better merchandised if a slight change in construction were made, our efficiency seems to take wings or die on the spot.

"Some seven years ago certain foreign mills began to send to this country a plain combed fabric that had much merit and found a ready market. It was a fabric that could have been successfully made with the equipment in many of the domestic fine goods mills. But our mills here did not wish to change over to that fabric and so continued what they were doing. After two to three years had gone by the foreign construction had so supplanted our constructions that our fine goods mills were forced to make the change in self defense, and added to their profits by so doing. But in not being willing to make the change promptly the domestic mills failed to reap the better profits that were available during the time of urgent demand for the foreign construction.

"Doubtless there are many other similar concrete cases.

"It is entirely conceivable that many mills might well consider the thought of assigning at least a small percentage of their looms to various constructions other than their regular standard product; working closely with trade, having in mind the development of fabrics which may lead to an increased number of uses and also increased consumption.

"Would we not achieve more satisfactory results, both as to continuous operation and as to reasonable returns upon the investment if we worked with the individual customers to ascertain what they want, how they want it, and when they want it?"

Southern Textile Association.

PRESIDENT DIXON said, "The Southern Textile Association deserves the approval as well as the cordial support of this association. The group meetings of the superintendents and overseers in the Southern Textile Association have been productive of good, not only to the men themselves but to the mills they represent and to the industry as a whole. Seeing the benefits derived from this organization, the National Association of Cotton Manufacturers a year or so ago was responsible for the creation of just such an association among the superintendents and overseers in New England. In our case, the organization is already formed and has been functioning for years and it does seem that it is as little as we can do to give it our hearty support and insist upon our superintendents and overseers attending the meetings."

Advertising and Merchandising

Arthur C. Port, sales manager, P. H. Hanes Knitting Co., Winston-Salem, N. C., was the final scheduled speaker of the session. He discussed advertising and merchandising as applied to the textile industry. He gave the cotton manufacturers some examples of advertising and education work on the part of knit underwear manufacturers, and also of some experiences of the Hanes company in advertising and merchandising. Concluding, he said in part:

"It is a significant thing that the advertising profession has met with more failure in the textile industry as a whole than any other I can name. You will pardon me if I say quite frankly that the tradition ridden habits of the textile industry in this country have made it well nigh impossible to get over to it anything constructive in the way of modern merchandising methods so that the industry itself or the individual units thereof would be able to compete as

they should be able to compete for their proper share of the consumer's dollar.

"The business of advertising as at present constituted is a young business compared with the textile industry but I ask you to consider just for a moment the rise of some of the young industries that have grown up with the help of advertising. Need I go any further than to mention the automobile, the radio and electrical household refrigeration and remind you how the printed and spoken word have created wants, stimulated desires and caused buying action in millions and millions of homes? Behind the creating of new wants in the minds and hearts of the people has been a definite program of controlled distribution which in the case of the automobile industry and the electric refrigeration industry has not been permitted to become demoralized from a price standpoint even through such an experience as that of the last six months.

"I ask you to consider the possibilities from an industry standpoint of a unified front on the part of the 35,000,000 spindles of this country or any major fraction thereof in an effort to stabilize first of all and then to stimulate sales and production in the industry. An assessment of a few cents per spindle not only on the part of those who believe in an advertising-merchandising plan but on the part of those who are willing to put their faith in the judgment of others who may have a little more vision in regard to this great modern, economic force would provide a fund that could easily, if wisely administered, bring about a new era in cotton textile manufacturing.

"A few members of the Mercerizers' Association have considered their problems in this regard and have established an inside group known as the durene group. Durene is a copyrighted name covering certain definitely established constructions of mercerized yarn and durene is on the way with a three-year program of endeavoring to establish its quality, style and wearing power in the minds of the people through a great variety of knit goods and woven goods.

"The Cotton Textile Institute needs the support of every member, and non-member for that matter, in the fight to restore cotton goods to their proper place in the textile world. An advertising-merchandising department of this industry that could feel as confident of its life as is the case with the merchandising and advertising departments of most first class corporations and backed up with a fund of proportions sufficiently large to reflect credit on a great industry would without doubt, under expert guidance, be able to accomplish wonders. There can be no question about this, particularly if every contributor and every member would conscientiously make a study of the problem from a new angle and realize that voluntary cooperation with what might be decided upon as best for the entire industry would in due time reflect itself most favorably in his own sales and net profits.

"If the Cotton Textile Industry continues to regard itself only as a producer of basic goods and if the merchandising and the resale of these basic constructions are entirely the responsibility of other groups, the other groups will continue to make most of the profits. From an individual standpoint a manufacturer may feel that the only way in which he can make money is to keep knocking night and day. Unless there is a well defined market to absorb this production, no economic law is going to acknowledge the truth of his contention. An over-sold market will react every time. It is impossible to force upon the people unwanted goods except at a sacrifice of profit and the science of merchandising wanted goods, advertised goods, properly distributed goods lies in the fixed ratio which must exist at all times between sales and production.

"A few weeks ago in New York we were shopping the market for piece goods for our line of men's trunks. Wherever we went we heard about gray goods selling for less than the cost of production. Nobody refused to sell us any finished goods because of this, however. The value added to the gray goods by finishing and printing seemed to represent just about the same spread as was the case when gray goods were higher in price. According to our information, nobody was any more eager to buy print cloths or broadcloths or whatnot than they were when prices were somewhat higher. In fact, most converters seemed to feel that an advance in price might stimulate trade.

"Such an advance might be very acceptable. It might cause additional buying by the cutting up trade, by wholesalers and by retailers. In the last analysis, however, it is the speed, or lack of it, with which the consuming public takes your merchandise that determines the volume of your business individually and that of your industry.

"How can you possibly make the consumer want cotton goods after years of propaganda by competing fibers and fabrics without telling him about the cotton goods through advertising? How can he appreciate anything to any extent regarding which he has never been educated? Has anything ever been done to set up standards which he can easily follow with the application of a little intelligence? Has any help ever been given him from the industry as such that would make him desire quality goods of cotton? The fabricators of garments and other commodities out of your cloths have done much, but not to sell your constructions. Rather do they sell what they themselves put into the finished product. Has anything ever been done to sell the consumer on combed yarn and if such an activity were undertaken would you wait until evils of misrepresentation and other unethical practices had crept into the sale of so-called combed yarn goods before any standards were set up to protect the consumer? Witness the situation on so-called part wool fabrics in blankets and heavy underwear. A pitiful situation that every right thinking manufacturer deplores appears now subject to control only if the Federal Trade Commission finally exercises its prerogatives.

"We have such unlimited faith in the successful operation of intelligent advertising-merchandising effort that we know an acceptance of this idea with proper investigation on the part of the membership of this association and provision for adequate funds based on a reasonable per spindle tax would in due

(*Continued on page* 963.)

Helpful Discussion *at* Boston

Night Work Elimination, Institute. Advertising and Other Interesting Subjects Covered at National Association Convention

THE GLOVES were removed, and subjects of pertinence were handled frankly and openly at the 75th anniversary meeting of the National Association of Cotton Manufacturers, held at the Copley-Plaza Hotel, Boston, Mass., on April 30th and May 1st. For the first time, the Cotton-Textile Institute was the object of adverse criticism in an open meeting, this and other topics of importance being discussed openly by protagonists and antagonists. The entire program as it unfolded from one session to another provided a means of much energetic discussion, which, it is felt by many, will eventuate in a more definite basis of understanding throughout the entire industry.

TRULY, the fireworks were set off at the National convention, reported here. Extemporaneous discussion of a frank and open nature, added to an unusually pertinent and well-balanced program, made the 75th anniversary meeting one of exceptional interest and material and definite value to the industry. It is generally felt that much good will result from the discussions pertaining to the industry's ills.

—THE EDITOR.

The first session of the convention was held on Wednesday afternoon, April 30th, and President Lincoln Baylies surrendered the chair to Robert Amory, a past president, who conducted the session in a discussion of problems confronting the textile industry. Donald Comer, president of the Avondale Mills, Birmingham, Ala., had been selected to discuss problems affecting the industry in the South, and Eben E. Whitman, vice-president of William Whitman Company, was on the program to discuss problems confronting the industry in the North.

Address of Donald Comer

Mr. Comer pointed out first that the textile problem in the South was definitely interlocked with the farmer's problem, citing intolerable farm conditions of low incomes and struggling workers, not, as he said, in justification for unsatisfactory industrial wages, but to show the economic bearing. He pointed out the contrast existing between farm incomes and cotton mill incomes of former days, and the present industrial situation, referring also to the improvements and progress that have been made in the latter.

Diverting briefly, Mr. Comer referred to the price of cotton, saying: "Its prevailing price provides its grower with the scantiest living. His lands require artificial fertilizer and its growing requires constant and continuous cultivation. So often he lives in the meanest surroundings. Half of his total crop goes export, and every one of these foreign dollars he spends in this country, largely for things made in the North. His baby rattle, his shroud, his hat and shoes, his cup, knife and fork, his hoe, mower and harvester, the clock on the shelf, the lamp on the table, all come from this section. The more dollars for his cotton, the better customer for you. With his improved economic condition would also come a more ordered movement from farm to industry. We can be helpful to the farmer in another way and solve one of our problems at the same time. Every cotton mill center should be a distributing point for better seed. We should encourage the selection and planting of better seed and pay a premium for the cotton."

The speaker next referred to the programs under way for the reduction of illiteracy, and told of the efforts, in the form of opportunity schools, that had been initiated at the plants of his mills, and some of the specific results of this work. He next discussed statements pointing to unemployment resulting from the machine age, expressing the possibility that the trouble comes largely from dissatisfied farmers coming to town too fast. He showed that in industry, generally, reports had indicated an increase, and that in the textile industry, between 1904 and 1927, the number of operatives had increased 55 per cent. against a 48 per cent increase in spindleage.

When an industry finds itself in difficulty, Mr. Comer said, "naturally it looks for causes and cures. There are many doctors, some of whom scrouge themselves in. The textile industry is more than willing to learn at the feet of any helping friend. We prefer, though, naturally, advice that comes from practice rather than theory. We remember the story of the dejected old rooster standing over a nest of half hatched spoiled eggs while the hen was away at a meeting telling young pullets how to raise chickens. * * * Outsiders who come with open minds, and acquaint themselves with all the facts, will be welcomed with glad hands. Don't think, however, that we have no critics from within. The Daily News Record of April 8th carried on the front page in large head-lines, 'Kendall Sharply Arraigns Cotton Textile Industry.' Mr. Kendall is a cotton mill owner both North and South, and I am in sympathy with his eagerness for progress, but possibly his problems are just a little less difficult than the average. A boy scout was asked what good deed he had done since the last meeting. He was a little sandy haired, freckled faced boy, and he replied that Mr. and Mrs. Smith had passed his house on their way to catch the 8:13 train, and he felt sure that at their speed they could be late, so he sicced his dog on them to hurry them on."

Mr. Comer discussed briefly the problems of the pioneers in the industry, and passed along to a quotation from the address of Bernard M. Cone, concerning the present textile situation, which, Mr. Comer quoted, Mr. Cone concluded as follows: "I am sorry, but I have no remedy to offer. If I did it would already have been applied. Mergers will not help. Unions will not help. Surveys will not help. Legislation will not help. The thing will have to work itself out like an epidemic of influenza. Either production will have to come down to consumption or consumption catch up with production." Mr. Comer quoted from the article of Marjorie Potwin in the January issue of COTTON, "If a driver, down the road just ahead of the cotton mill people of the South, undertakes to cross on a certain bridge and it falls through with him, the southern operatives are going to put their confidence in another bridge on some other road." He continued, "As Mr. Cone says, the solution to our problem is difficult and the way is not clearly marked, however, he states that unions will not help. Their experience in textile England and here in your section are warnings and because of this record we feel that we should look further. * * * I would not take away, even if I could, any good results that industry has reaped from unionism, but I prefer today to believe that the ultimate solution of our own problem would be along other lines, along the lines of partnership. If we are slow, it is not because we are smugly content. There has been and continues to be progress. I believe there is today high idealism among our industry leaders and wherever there is some lack of social vision there are many evidences of a quickening desire to catch step with progressive leadership." Mr. Comer told of some outstanding examples of stock participation and employees' councils. Continuing, he said:

Lincoln Baylies, President.

"We know that cotton mills are not the stopping place in the progress from rural life to an industrial one. They are just the first step. They offer the quickest opportunity for untrained hands. To quote Dr. Potwin in November COTTON, 'as higher occupations open up, superior ability will market its services there and dismiss itself from the class of its origin, leaving places in the mills to be filled by new families from the country.' She further says that cotton mills have recently found themselves in the position of the driver of a car, who picked up a cripple by the roadside, took him to the hospital only to find upon arrival that he, the driver, was accused of having run over the man and crippled him."

Yet, Mr. Comer said, "never before was there such urge from within our industry for progress, more rapid progress. Conditions today should only be a starting place for a better tomorrow and unless oncoming industry is to be captained under such a resolve, then, as bad as some rural conditions are, our section might still be better off if our industrial progress were more slow.

"Mr. G. O. Hunter, who sells our cloth, says, 'The most encouraging thing for a long time is agreement by so many mills to the 55-50 hour plan.' Let me add: Let's not wait too long before trying to find a way to shorten hours."

Referring to the social, human side of the problem, Mr. Comer quoted from Charles R. Towson, that some of the problems are: 1. The newer attitude of younger employees who do not know the adversities from which their parents were lifted by the mill industry. 2. Provide fairly for the displaced workers by other work with equal pay until they can locate elsewhere. 3. Loss of time and consequent low annual earnings. 4. Undesirable living and working conditions in some places. He quoted from T. M. Marchant, that, "sooner or later mill executives must face the question squarely with reference to the working of women and young people at night. Wouldn't it be one of the most forward steps we could take if we should stop employing them at night? We are engaged in the manufacture and distribution of cotton goods, a material that is needed throughout the world, yet we are refusing or failing to look ahead, and our industry stands almost alone, as one of the few of the largest and most important looked upon with disfavor."

In connection with the problems as stated by Mr. Towson, Mr. Comer referred to several methods of caring for employees during dull periods, etc. He quoted from W. D. Anderson's address in Richmond in 1928, concerning the question of night work, and said that a more spiritual feeling is needed.

With regard to the 55-50 hour plan, Mr. Comer said, "I think this represents the most forward step yet obtained by the textile group as a whole. I am happy to express to Mr. Hines and Mr. Sloan of the Institute the thanks of us all for their devotion to its accomplishment. It is a forward step, and I trust that we will all catch step with it."

In closing, Mr. Comer said that, "Danger—Think, is the message I have for us all today. Let's keep ahead of threatening fists. Most of our problems are common. Their solving demands hard work, straight thinking. Let's not weary at the job. Men and women who daily climb our factory stairs have not wearied in their trust of us. Trust is a sacred thing. Ours is the opportunity today."

Whitman's Proposal to Eliminate Night Work.

Eben S. Whitman was next introduced by Mr. Amory to discuss problems affecting the industry in the North, but the speaker devoted his entire address to a proposal for the elimination of night work in mills, by an agreement which he submitted as being

entirely legal. As to the industry's basic problem of over-production, Mr. Whitman declared the cause is, "the industrial exploitation of women and children in our mills. The growth of this unfair and selfish utilization of women and children through night employment in the cotton mills of the southern states, is solely and directly the cause of the downfall of this great and essential industry. There should be no place for such a practice in our industrial system. It is opposed to every humanitarian principle; it is wrong in every hygienic premise, but due to the conditions surrounding the mill village system peculiar to the South, it creates a social condition even more objectionable than the effect of the practice itself. It is prohibited by law in every important producing country in the world, the only exception being in certain sections of the United States." Mr. Whitman cited production figures showing the effect of night operation. He declared that the textile industry could not be regulated in the same manner as the steel industry, as the most important single factor in the latter industry controls about 65 per cent of the total production. He further stated that textile problems could not be solved by the consolidation of manufacturing units.

R. T. Fisher, Secretary.

Mr. Whitman criticized the Cotton-Textile Institute for not having approached this problem, which he characterized as the fundamental cause of excess production. He said that, "the Institute has not been able to attack vital matters, it has not been able to dig into the root causes for our deplorable condition, because of the influence brought to bear against such activities by an influential minority group that is committed to the policy of night running by any means and at any cost." He said that, "the effort that is now being made to commit the industry to a 55-hour day week, and a 50-hour night week, is a perfect illustration of a compromise with the imperative needs of the situation. It is called another step in the right direction. We can go on forever taking such steps without reaching our real objective. Unless we act for the benefit of the industry as a whole, conditions can only become increasingly worse as time goes on. In the end, forces outside the managements of our mills will be brought to bear on the situation. It is far better that we correct this condition ourselves, now, rather than become the subjects of coercion from these outside forces later on."

"We are now confronted with the problem of how to proceed. Our first step is to organize a majority force composed of all those persons imbued with a true spirit to co-operate for the common good of the industry as a whole, to the end that women and minors be eliminated from night employment. * * * The industry is very fortunate that over-production has not been brought about by the addition of costly machinery. The discontinuance of a disgraceful practice of employment is all that is needed to restore prosperity. The comparatively small investment required for dwellings has been responsible for the rapidity of the growth of the practice."

Mr. Whitman then proceeded to present a plan of action, stating that it "is predicated on the assumption that a survey of the entire industry would disclose that a substantial majority of its mills are opposed to the practice of employing women and children at night. How can such a survey be made? The Cotton-Textile Institute being more fully representative of the whole industry than any other organization, is our best agency, and should be utilized for the purpose. Can we use this agency? If a sufficient number of its so-called designated representatives believe that in the interests of the whole industry such a survey should be made, and so advise the Institute, it does not seem probable that their request would be denied. It would take but a short time to find out what the position of the industry is on this vital matter of employment.

"As a part of the survey, an agreement could be presented for signature, reading as follows:

"'We, the undersigned, hereby pledge ourselves that we will not adopt, or if now adopted, will not continue, the employment of women and minors in night labor. This agreement on our part to become effective four months after notice to us by the Cotton-Textile Institute that in its determination, the agreement has been signed by 76 per cent of the industry. For the purpose of this agreement, *Night* shall mean a period of not less than eleven consecutive hours, including the period from 10:00 P. M. to 5:00 A. M. *Minors* shall mean young persons who have not attained the age of eighteen years.'

"Thus, a majority force would be created in the industry, all pulling in harmony toward a common objective. This condition would place the Institute in a position of leadership, and its influence would be greatly increased. According to the best advice, the legality of such an agreement is beyond question. The method of procedure must be in order for it is practically the same as that now being employed by the Cotton-Textile Institute in the matter of uniform weekly hours.

"Each mill executive who believes in the soundness of this principle should consider it his duty to immediately request the Cotton-Textile Institute to make the survey referred to at the earliest possible moment. A substantial response to this appeal would result in the most constructive movement that the industry has made since the formation of the Cotton-Textile Institute, and in my opinion, would place that organization in a position to stabilize the entire cotton manufacturing industry within a very short period of time."

Ward Thoron's Discussion.

At the conclusion of Mr. Whitman's address, Mr. Amory, the chairman, opened the meeting for free and informal discussion of the subjects presented, and Ward Thoron, treasurer of the Merrimack Mfg. Co., with plants at Lowell, Mass., and Huntsville, Ala., enlivened the meeting by expressing definite opinions concerning some of the matters in hand. He said first that "all of this crying about children working in the mill at night is pure bunk. No one works children in the mills, except as a charity to the child, and those who do this do so at a loss and inconvenience to themselves. There is more child employment in the North than in the South. In the South most of the child labor is in the field, where they work for several months in the season. It is the rarest thing that children are employed, and only as a charity, and then they are not employed at night, but in the daytime, and then in the cloth room or elsewhere where the conditions are pleasant, making it possible to earn some extra money for themselves."

Mr. Thoron also said that in his opinion, "all this excitement about the poor women is needless, because the poor woman doesn't work any more than she wants to. I find for example in Alabama, where any woman who wants to work in our mills can work 50 weeks in the year steadily, that the average work which a woman does in our mill is equivalent to 25 weeks. The remainder of the time is taken up by spare hands."

Mr. Thoron strongly attacked the Cotton-Textile Institute and the Association of Cotton Textile Merchants of New York, characterizing both of these organizations as pests, and criticizing particularly their "broadcasting of statistics," which, he said, "place the customers on their guard, telling them there is plenty of cloth and no need to pay the price." These figures, he added, "frightened some of the manufacturers out of their senses, as they felt, seeing the big totals, it was best to dump goods while there was yet a chance to sell any, and manufacturing margins narrowed." He declared it as his opinion that only the head of the Institute should see the statistics.

With further regard to night running, Mr. Thoron continued that, "Some years ago, I said that if all night work was stopped, the price of cotton would drop two cents a pound and cloth would go up five cents a pound. I still feel about the same on that, but the 55-50 schedule, or just eliminating women from the night picture, is pure bunk." He pointed out that if all night running is stopped, those with money "would add to the fortunes of our friends the Drapers, Whitins, Saco-Lowells, and others, by installing new equipment. During the period of re-adjustment, things would be all right, and then you would be in a worse position than before."

Russell H. Leonard, president, Pepperell Mfg. Co., followed Mr. Thoron, stating that he disagreed with him as to the Cotton-Textile Institute, but was in accord with him in believing that the elimination of night work would not cure the industry's ills. He cited the then existing demoralized conditions in the wide sheetings group, in which there was practically no night running. Mr. Leonard suggested a discussion from Mr. Sloan, president of the Institute.

Chairman Amory next introduced A. D. Whiteside, who had recently resigned as president of the Wool Institute, who spoke briefly on the subject of institutes, declaring it as his opinion that they have a good future in industry.

Mr. Amory next called upon George A. Sloan, president of the Cotton-Textile Institute, who made a lively and vigorous response to the criticisms of the Institute and its work. He declared that the textile problem is not one of night operation, nor of price-cutting, nor of over-production, but is fundamentally a "state of mind," granting that the Institute had not made the progress it should have made, he said that the mill executives had not co-operated as they should have co-operated. He then discussed briefly the 55-50 plan, reporting that mills representing more than 22,000,000 spindles had subscribed to its soundness, and adding that recently 2,000,000 spindles have been added to the Institute's roster. "Does that sound like compromise?" he asked. "To me, that sounds like progress for co-operation, the only cure for the troubles in this industry or any other industry." Mr. Sloan stated that in the process of formulating the 55-50 plan, it was developed decisively that this was the only plan which would be acceptable to the industry as a whole. He too referred to the unsound merchandising extant in the wide sheeting group, where no night work prevailed. He

Kendall's Ten Commandments.

AT THE banquet of the National Association in Boston, concluding the 75th annual meeting reported herewith, Henry P. Kendall, president and treasurer of The Kendall Co., presented as his text, and elaborated upon, a set of "Ten Commandments," which he offered for the consideration of textile manufacturers. They follow:

First: Thou shalt seek understanding of the industry's history; the basic causes of its troubles and problems.

Second: Thou shalt think straight, face issues and speak plain common sense.

Third: Thou shalt lift the industry out of the long-hour, low-wage class, for by so doing, the gap between production and demand will be narrowed and the move will be in harmony with the trend of social betterment.

Fourth: Thou shalt maintain earnings of employes, for the law of industrial prosperity is the maintenance of purchasing power.

Fifth: Thou shalt exalt competency of management before all else, and welcome young red blood into the industry, to do things, not the way they have always been done, but in the one best way.

Sixth: Thou shalt compete in creativeness, rather than on price alone, for research is today the gateway to survival and leadership.

Seventh: Thou shalt seek the path of integration of functions, for profit today is the sum total of economies, and it is uneconomical to operate on the present disjointed basis.

Eighth: Thou shalt practice team-work and not leave all the co-operation to the other fellow.

Ninth: Thou shalt exalt aggressive, far-seeing commonsense, courageous leadership.

Tenth: Thou shalt take up the trumpet, and spend money to replace the passive indifference and ill will which now obsess the mind of the public with good will.

said this, "is a state of mind, it is a state of unintelligence, or if it is a state of intelligence, it is a state of greediness."

Mr. Harrower pointed out that investigation on his part with regard to a lumber organization, had disclosed that before arriving at the point of success which caused President Hoover to characterize it as an example, went through eleven years of work before accomplishing anything. Allan McNab, head of the New England Southern Mills, expressed his confidence in the work being done by Mr. Sloan. Samuel C. Lamport was called upon, expressing the opinion that night work is a fundamental problem in the industry, and declaring that Mr. Whitman's plan had back of it several basic truths. Following this discussion, the session was adjourned.

Amory Corrects Whitman Paper.

At this point it should be reported that at a subsequent session on Thursday afternoon, Robert Amory, who was chairman at the Wednesday session, took occasion to clarify or correct certain references and inferences in Eben S. Whtiman's discussion of night work. Mr. Amory said that since the addresses of Mr. Comer and Mr. Whitman, he had heard "a good deal of comment about them, and some people point out that in Mr. Whitman's paper he stated that the only place in the world where night work for women and minors was permitted by law was in the southeastern states of the United States. That of course, is not exactly correct. If Mr. Whitman were here he would agree with me that legally night work for women is also permitted in a number of northern states, although I will state that it is not usually indulged in.

"The other thing that must be remembered in connection with Mr. Whitman's paper is that it would be very unfortunate to have the impression go out that we in the North think that the South should remedy the condition of employment of women and minors at night. We may think so. A great many of us do think so, but we should be fair in stating that a number of us are also running plants in the South and are running them under the conditions to which we object."

The Thursday morning session was given over to a discussion of common interests of cotton growers and spinners. Carl Williams, a member of the Federal Farm Board, was the feature speaker, and others making addresses were C. O. Moser, of the American Cotton Co-operative Association, and Sidney Y. West, of the American Cotton Shippers Association.

The Thursday afternoon session was given over to a discussion of problems connected with distribution. Elizabeth McDonald, head of the consumer research department of the Frigidaire Division of the General Motors Corporation, was the first speaker, being followed by R. H. Dick, president of Barrington Associates. The final speaker was Allyn B. McIntire, vice-president in charge of sales development, Pepperell Mfg. Co., who discussed "Textile Advertising."

The Problem of Textile Advertising

After dividing the industry into three groups—first, the gray goods man, second those who make up finished yard goods ready for fabrication, and third, those to make the finished article of merchandise, such as sheets, towels, blankets, etc.—Mr. McIntire dealt mainly with the latter group, saying in part: "You cannot make a success of a textile mill unless you cater to the whims and fancies of fickle women. We have never taken the trouble to educate the public on any of our fabrics. Women are not interested in our mills. They do not care whether we dream our products into existence or whether we weave them on a tenter frame. No woman buys an article of merchandise. She buys what the thing will do. A sale does not take place across a counter. It takes place in a man's or woman's mind. Unless you put those thoughts into their minds through advertising, they are not going to get there. You must think in terms of selling these days. If you gear your mind and mill to that fact you naturally come face to face with advertising. You cannot think of selling in any form without considering advertising. If the public wanted your goods in your quality, under your name, at your price, the trade would not be haggling with you about that last eighth of a cent.

"There are certain departments of the industry in which advertising has been used with apparent success and which are on a plane with other industries. I refer to the advertising of sheets, blankets and towels. You will agree that there have been some benefits to those of us who make those products and who have advertised them. We at least own our own business.

"The very nature of the set-up of the textile industry is one of the highest drawbacks to progression along advertising lines. I am not here to criticize the selling house, but it will take a lot of fact presentation to me to convince me that the selling house is a sound and economic factor in the distribution of textiles for those mills large enough to afford their own selling force. The selling house has forced the mill man to go back one step further away from the ultimate consumer. We are too far removed from the women or man who are ultimately buying our goods. We do not know enough about them."

Address of Kendall at Banquet.

The concluding session of the convention was the annual banquet, held on Thursday evening, where President Lincoln Baylies acted as toastmaster and took occasion to review briefly the history of the organization during its three-quarters of a century of existence. The feature speaker was Henry P. Kendall, president of The Kendall Co., operating mills in the North and South, whose previous addresses and comments on the industry's problems had attracted wide interest. Mr. Kendall at the banquet session presented a set of "ten commandments" for the industry, which will be found on page 904 of this issue. He urged a reduction in hours, without loss

(*Continued on page* 960.)

Interesting Show *at* Boston

The International Textile Show in Boston presented a wide variety of exhibits showing much in the way of new and improved equipment. Newly developed machinery, as well as refinements in existing models, proved to be the high light of the show., which showed also many auxiliary products, etc.

SHOW WEEK in Boston, from April 28th to May 3rd, inclusive, provided an occasion of great value and benefit to the industry. The week was chock full of affairs which kept the textile resident and visitor busy absorbing those features of interest to him.

The largest and most comprehensive attraction was, of course, the International Textile Exhibition, which held forth during the entire week at Mechanics Building, from 10:00 A. M. to 10:00 P. M., each day. This exposition proved the center of activity, from a textile standpoint, throughout the week, and was supplemented by various meetings and conventions of a textile nature. Chief among these was the 75th anniversary meeting of the National Association of Cotton Manufacturers, held on Wednesday and Thursday of show week.

As usual, the exhibition, or show, was extensive and complete, in its presentation of equipment, supplies, services and products for the textile industry. This year the exhibits were especially comprehensive, including representation from practically every type of manufacturer providing equipment and service to the textile industries. The preparatory and spinning machinery makers, the loom manufacturers, and producers of dyeing and other finishing equipment were on hand with operating and demonstration exhibits which provided a substantial nucleus for the scores of other concerns presenting supplementary equipment, products and services.

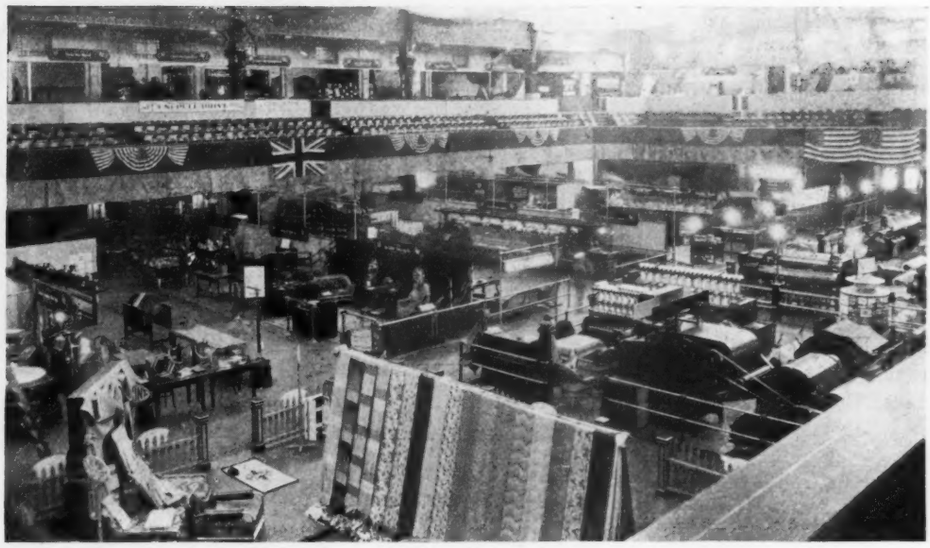
The operating exhibits, those with equipment in action, naturally proved to be the largest centers of attraction and in this group, the show this year was of especial interest in that it presented a number of novel and unusual features which had not been previously demonstrated publicly, and for which the exposition was utilized as the means of introducing them to the trade.

Space limitations prevent descriptions of each exhibit which would not be inadequate either for the man who attended or for the man who was not present, and this resume can but touch upon some of the more unusual and novel developments that were presented.

Warp preparation and yarn packaging machinery—winding, etc. — offered many interesting features. A brand-new exhibit was that showing a circulating spindle winder, whereby the operator remains seated or standing in one position at the end of the machine, the spindles traversing around the

WITH THE Boston show passed into history, a successful and profitable event, it is appropriate at this time to direct attention to the next major textile exposition, the Southern Textile Exposition, which will be held at Greenville, S. C., during the week of October 20th. Though it is several months in the future, definite plans have been made in practically every respect. It is expected to prove of equal importance to the show in Boston, and its location will afford more convenient attendance for those who were not present at Boston, and those attending can see repeated much of the eastern exhibit, with augmentations which the elapsed time will make possible. — THE EDITOR.

A view in the main hall at the International Textile Exposition in Boston.



Another view of the same hall at the Boston textile show.

machine, making it possible for the operator to perform all of her work at one point, such as tying knots, creeling bobbins, doffing, and other duties. Another brand-new demonstration showed a regular type of cone winder so designed as to operate without the use of cams or any reciprocating motions, the winding-on of the yarn being accomplished by means of a grooved drum for each spindle and cone. Regular types of winders for preparing cones, and the use of magazine cone creels in connection with high speed warping, as well as the method of automatic spooling with high speed warping which has been demonstrated for a number of years, were in operation, and another demonstration showed fine yarn being wound at high speed over-end from spools magazined in the creel.

Weaving was as usual well represented, and formed one of the main elements of the exposition. Each manufacturer exhibiting had a number of looms in operation, all with the latest attachments and improvements. A definite impression received when visiting the loom displays was that the synthetic fibers, as well as pure silk itself, are being adapted with exceptional success in conjunction with cotton, for every loom display included operation involving these additional fibers. The increasing importance of these allied fibers in the industry was further demonstrated by the elaborate displays of yarns and materials composed entirely of them and using them as component parts of their constructions. A third demonstration was the display of piece goods under the auspices of the National Association of Cotton Manufacturers, where a comprehensive and extensive exhibit of mill products was seen. In conjunction with this, there was an educational exhibit by the Department of Agriculture, relating to better practices in cotton growing, ginning and handling, and a Cotton-Textile Institute exhibition of various products made from cotton.

Returning to the equipment itself, the opening and picking departments shared with new methods of spinning equipment the main interest in yarn preparatory and producing machinery. Improved one-process picking of several kinds was in operation, and one exhibit that attracted a lot of interest showed a new attachment for pickers whereby the machine automatically doffs the finished lap, placing the new lap roll in position, and continuing its operation and production without stoppage for the doffing operation. Opening machinery in various combinations was displayed, with some of the equipment in operation.

Long draft, or improved draft, spinning, was being demonstrated in a number of booths, with a wide range of methods available for examination. In fact, throughout the hall, at different booths, perhaps practically every form of high drafting was in operation, ranging from the use of an unweighted roller, through all of the methods of those involving the use of special methods, etc. Large package spinning and high speed twisting were likewise shown; and a twister operating without a cylinder, the spindles being driven by gears from a chain drive for every 24 spindles, was an especial point of interest.

Thus it went all the way through the different classes of exhibits. The foregoing are but indications, and mention is made of the major manufacturing equipment, and even then only of the more novel and unusual features. Throughout this group there were other machines exhibited embodying the latest refinements and improvements. In addition, in transmission equipment of various kinds, antifriction bearings, dyeing and finishing equipment, humidifying apparatus, oil spraying equipment, cloth room and drying and boarding machinery, pick counters, braiding machines, testing equipment, lighting systems, drives, card clothing—the story was the same: those exhibiting presented equipment and supplies of the latest design and model. In addition, there were found the usual scores of concerns with services, and products such as chemicals and dyestuffs, materials for use in textile processes, such as Monel metal, rubber and the like. In fact, this year's show will go into the record as one providing an opportunity to acquaint one's self with the latest and newest in plant operation.

The Federal Farm Board *and the* COTTON SITUATION

By Carl Williams
Member, Federal Farm Board

WITHIN two weeks, Mr. Williams came to the textile manufacturers with a statement from the Federal Farm Board. First at Boston, then at Pinehurst, he made the Board's first statements to the manufacturing industry utilizing the fiber, in whose marketing the Board is playing so important a part.

Because of his forceful and clear outline of the Board's activities, and his analysis of the cotton situation, the accompanying abstract of his address as prepared for the Pinehurst meeting, in essence the same as his speech in Boston, is reproduced here for the consideration of our readers.—THE EDITOR.

ANY DISCUSSION of the Agricultural Marketing Act and of the Federal Farm Board should begin with causes. The settlement of America was agricultural rather than commercial. Its real beginnings were in the corn patch—not in the manufacturing plant. During the first 150 years, towns grew up along seaboards. Industry gained a foothold in those towns, but the dominant thought of the people of the new world continued to be soundly and broadly agricultural.

During the French Revolution there came a tremendous demand from the old world for every agricultural and manufactured product which the people of the new world could furnish—a demand proportionately equal to that which came from the same sources during the world war. Prosperity sat in every household. That prosperity departed after Waterloo. Cotton which had sold at 31 cents a pound in 1814 brought 15 cents in 1821 and nine cents in 1829. All other agricultural products suffered in proportion. So did the price of manufactured products in the cities. Farmers, in despair, swarmed over the crest of the Alleghenies, took up new lands, raised their own living, built their own houses, made their own clothes and became sufficient unto themselves.

Industry, being unable to move and apparently unable to live without aid, went to Congress, asked for help, and got it in the form of a protective tariff of some 20 per cent ad valorem.

That was perhaps the first time when the American Government came to the rescue of one specific class of its citizens. Since then there have been a number of other times. Continuing tariff demands by industry developed a permanent national program. Other programs were ventually built up for labor, for finance and for transportation.

The farmer, helpless by reason of individualism and isolation, constantly lagged farther behind in his comparative standard of living until in the end his relative lack of progress became a matter for national concern and official investigation.

In 1920 Congress appointed a joint commission to investigate the ills of agriculture. In 1922 President Harding called an agricultural conference. In 1925 the National Industrial Conference Board completed a study of the agricultural situation in which the conclusion was reached that "American agriculture appears to have fallen out of step with the general economic development in the country."

It was said by that Board that farmers lacked any national organization to deal with recurring surpluses, that they lacked organization and system in their marketing processes, that they lacked organization and standardization in grading and marketing, and that they needed a more systematic method of contact between producer and consumer.

"While agriculture has become inseparably involved," said this National Industrial Conference Board, "in a network of inter-relationships with a more and more highly organized system of industry, trade, finance, transportation, and Governmental activities, it has so far not developed effective means for adjusting itself to this new situation."

In 1927 the National Industrial Conference Board and the United States Chamber of Commerce appointed the so-called Business Men's Commission on Agriculture. A lawyer, a railroad president, a banker, and manufacturers of electrical equipment, cotton textiles, lumber, food, and automobiles comprised the Commission. It said:

"No unrest as formidable as that witnessed among certain groups of farmers in recent years can be sustained without a real grievance and sugar-coated political pills will provide no lasting relief for an ailment which has in some phases become chronic. We are forced to the conclusion that accepted economic measures do not fit, at least do not cover, the farmers' case and that this situation presents a new challenge to economic and political advisors that cannot be evaded nor met with slogans."

Among the specific recommendations of the Business Men's Commission on Agriculture was the establishment of a Federal Farm Board, "to aid in the stabilization of prices and production in agriculture." With the advice and assistance of the Federal Farm Board efforts should be made to form stabilization corporations to engage in the buying and selling of farm products for the purpose of stabilizing prices.

"The Commission feels very strongly," the report said, "that all who are concerned in the improvement

of the agricultural income and its possible benefits to the business community and the nation at large should give serious consideration to the desirability of devising means by which the fluctuations of agricultural prices from year to year may be mitigated. The farmer is in this matter a victim of circumstances which are largely beyond his control or responsibility and in certain definite degree against the public interest, so that a measure of Governmental effort to aid in protecting that interest may properly be invoked."

After a winter's study of this Commission report, the United States Chamber of Commerce at its annual meeting two years ago appointed a special committee to prepare recommendations to be submitted to a referendum of its members. That referendum committed the Chamber to the creation of a Federal Farm Board. It also committed American business, as represented by the Chambers of Commerce of the United States, by an affirmative vote of 2,816 to 117, to the principle of co-operative marketing "based upon the established right of the producers of agricultural commodities to act together in associations, corporate or otherwise, with or without capital stock, in collectively processing and manufacturing, preparing for market, handling and marketing in interstate and foreign commerce such products of persons so engaged."

"ONE specific Farm Board project is the improvement in the character and staple of American cotton. We recognize the relative deterioration of recent years. We recognize the excess costs of production in some parts of the belt. We know that on the average the man who produces less than one-third of a bale of lint to the acre does so at a loss. We recognize no difference between a profit gained by an increased price and a profit gained by a lowered production cost, except that the latter method of gaining a profit is better for the land and causes less labor for the man than the former."—Carl Williams.

Out of all these studies and discussions, plus constant talk and argument in Congress, in country schoolhouses, and in the public press for ten years or so, there came the Agricultural Marketing Act and there was appointed the present Federal Farm Board.

That Act specifies the duties of the Board and declares it "to be the policy of Congress to promote the effective merchandising of agricultural commodities so that the industry of agriculture will be placed on a basis of economic equality with other industries and to that end to protect, control, and stabilize the currents of interstate and foreign commerce in the marketing of agricultural commodities and their food products by minimizing speculation, by preventing inefficient and wasteful methods of distribution, by encouraging producers to organize into effective associations or corporations and by aiding in preventing and controlling surpluses in any agricultural commodity through orderly production and distribution so as to maintain advantageous domestic markets and prevent such surpluses from causing undue and excessive fluctuations or depressions in price for the commodity."

To assist in effecting these ends, there was an appropriation of $500,000,000, of which $250,000,000 has been made available, and the Federal Farm Board came into action with wide discretionary powers to be exercised in furtherance of the objects which were declared in the Act to be the policy of Congress.

That was nine and one-half months ago. The Board was confronted with the problem of 6,500,000 farmers growing and marketing annually $12,000,000,000 worth of crops, each crop presenting situations different from any other and each part of the United States varying in climate, soil, transportation, markets, credit facilities, and people so that within each crop were many sectional problems.

Neither by law nor in fact could the Board work with individual farmers. On the contrary, Congress, speaking for the American people, had officially declared that any permanent solution of the agricultural problem must come through collective action on the part of farmers.

In the Agricultural Marketing Act this nation was definitely committed to the principle of cooperative marketing of farm products. The Board's job has been and is to develop that system of collective bargaining and to weld the common purpose of American farmers, of Congress, and of American business, as expressed by its own official spokesmen, into a compact whole for eventual common good.

In that process skeletons of national organizations of farmers for the marketing of wheat, of cotton, and of other farm products have been set up on the theory that producer-owned and producer-controlled farm marketing organizations, fostered by Government and financed for a time by Government funds, will eventually reach the point of independent self-support with no dependence on Government and no responsibility to it. To that ideal the Federal Farm Board is striving.

We recognize, of course, that an agricultural disease which has been slowly developing over a hundred years cannot be cured overnight nor that farmers, reared as individualists, will at once fully adopt the principle of collective action, nor that when they do adopt it, they will at once be fully capable of carrying on for themselves so that the Government can promptly step out of the picture. None of these things are immediately possible. All of them should eventually come to pass.

In the nine and one-half months of Farm Board existence it and the farmers whom it represents have been forced to face some unusual situations. Last October the tower of American business tottered. Finance and industry and Government rushed to its support. Big business and banks put $500,000,000 into stocks and so perhaps averted an industrial panic.

Commodity values were in equal danger and with worse consequences to the American nation than any speculative decline in the values of stocks could possibly bring about.

No support appeared. Business and finance were too concerned with their own immediate problems to give attention to the price level of food and clothing materials. The Federal Farm Board was the only hope for the American farmer and the American distributor and manufacturer of foods and textiles.

To prevent calamity in the commodity markets and

(*Continued on page* 965.)

Card Room *and* Spinning Room
Subjects Discussed at Selma

Reported by J. W. Swiney

CARD SETTINGS, licker-in settings, straight wire clothing for cards, humidification, cleaning spinning rings, caring for and cleaning spinning frames, turning spinning rings, end breakage—these and other subjects of interest, in regard to carding and spinning departments, were discussed at the meeting of the Eastern Carolina Division of the Southern Textile Association, reported here.

THE EASTERN CAROLINA DIVISION of the Southern Textile Association held the regular Spring meeting at Selma, N. C., on Friday, May 9th, and enjoyed one of the best meetings the association has ever held. There were 140 members present and a large number of those present took part in the discussion. N. B. Hill, superintendent, Caswell Cotton Mills, Kinston, N. C., presided as chairman of the meeting, and some very interesting points on carding were brought out in the morning discussion, while the same was true in regard to spinning, which was discussed in the afternoon.

Card Settings.

M. R. Vick, Rosemary Mfg. Co., Rosemary, N. C., was chosen to conduct the morning discussion on carding. He made it known in the beginning that he wanted the men to turn loose and take part in the discussion. He explained that there was no secrecy about carding, as no one knew anything that someone else did not know something about, so there was no need of anyone feeling any hesitancy in giving card settings. He urged the men to speak freely in answering the first question, which was on card settings.

The compilation of card settings at the bottom of page 911 represents the settings as given by nine different members taking part in the discussion, as well as the settings that are generally accepted as standard card settings.

Left, C. C. Cates, secretary, right, N. B. Hill, chairman, Eastern North Carolina Division.

In discussing the settings that he submitted, F. L. Craven, overseer carding, Borden Mfg. Co., Goldsboro, N. C., stated that he had tried closer settings, but had found them to give a weaker sliver and more motes. He explained that after experimenting around quite a bit, he had found the settings he had submitted to give the best results. Answering a question as to the kind of yarns he was making, he replied, "hosiery yarns."

C. S. Tatum, division manager, Consolidated Textile Corporation, Raleigh, N. C., next brought up the question as to which settings would have to be changed if production was to be increased or decreased. D. F. Lanier, superintendent, Oxford Cotton Mills, Oxford, N. C., here added that in answering Mr. Tatum's question that breaking strength be kept in mind. He said, "in other words, if you wanted to keep your breaking strength the same, would you use the same settings to card 200 pounds a day that you would use to card 125 pounds per day?" M. R. Vick stated that he had carded 200 pounds a day wtih the same settings that he used to card 125 pounds per day, and that as far as cleanliness was concerned, he had noticed no difference. To this, S. L. McCracken, superintendent, Fountain and Hart Mills, Tarboro, N. C., replied that he did not believe it possible for any setting to clean 200 pounds of cotton a day as well as 125 pounds a day would be cleaned. He said that 200 pounds a day was more than the card was supposed to do, and that when anyone carded this amount they would have to pay the penalty for overloading the card.

T. W. Mullen, superintendent, Rosemary Mfg. Co., Rosemary, N. C., asked if anyone present was carding as much as 200 pounds per day. Mr. Aiken replied that at Erwin Mills, Erwin, N. C., making 8s to 14s, he was carding 207 pounds a day and getting good results. Quite a bit of discussion developed on this subject, and after hearing from several on the matter, it seemed that the general consensus of opinion indicated that around 125 pounds per day was the production that most cards would turn out consistent with good results.

Next, the question as to whether or not the setting of the licker-in to the feeder plate has much effect on breaking strength was brought up, it being pointed out that the closer the licker-in is set, the lighter the sliver will have to be. N .B. Hill said that judging from the settings given by the different ones taking part in the discussion it would seem that the best results are obtained by using wider licker-in settings. C. A. Davis, assistant superintendent, Consolidated Textile Corp., Raleigh, N. C., told of how he had increased his feed plate setting from 12/1000 to 17/1000 and had increased his breaking strength three pounds. Another member pointed out that he had varied his feed plate settings from 7/1000 to 12/1000, but had finally decided upon 7/1000, for he obtained much better results with this setting.

J. T. Huneycutt, general superintendent, Smithfield Mills, Smithfield, N. C., explained that he was not on colored yarns at the present time, but that he had for a number of years made them and that during this

time he was using cotton of around 1¼-inch staple. He said that he had carried his feed plate and licker-in settings up as high as 10/1000 and down as low as 5/1000, and then decided on 7/1000 for both of them. He said the rest of his settings were as given in the compilation of card settings. He stated that he had found 5/1000 to be by far the most satisfactory setting for the doffer.

Mr. Mullen here asked, "have we really decided what are the best settings for the feed plate and licker-in?"

C. S. Tatum.

T. W. Mullen.

A vote on these settings was called for. It was decided to vote first on the best setting for the feed plate, considering strength as the paramount factor. A show of hands revealed that two were in favor of settings of 10/1000 for the feed plate; five were in favor of 17/1000 for this setting; eight favored a setting of 12/1000; while three favored a setting of 7/1000.

Effect of Licker-in Settings on Breaking Strength.

A vote for this same setting was then asked for, making cleanliness the primary objective. Here eight voted for a setting of 10/1000; no one favored 17/1000; eight voted they preferred a setting of 12/1000 for the feed plate; and seven intimated that they would prefer a setting of 7/1000 at this point.

Mr. Tatum brought out that only a small per cent of the members had voted, so he asked that the question be explained specifically and a re-vote taken. It was decided at this time to ask for votes for the different settings of the feed plate to use in order to obtain: (1) cleanliness; (2) strength; (3) evenness. In order to obtain cleanliness, 19 voted for a setting for the feed plate of 7/1000; 21 voted for a setting of 10/1000; 10 cast their vote for a setting of 12/1000; and none voted for 17/1000. Taking strength into consideration, two voted for a setting of 7/1000; 16 decided that they preferred a setting of 10/1000; 14 raised their hands in favor of a setting of 12/1000; and 12 decided on 17/1000 setting to obtain strength. To obtain evenness, two voted for a setting of 7/1000; 15 expressed their desire for a setting of 10/1000; 15 voted for a setting of 12/1000; and six favored a setting of 17/1000.

It was then decided to find out which settings would be preferred, taking cleanliness, strength and evenness into consideration, for hosiery yarns and weaving yarns. The votes for the different settings of the feed plate in making hosiery yarns were: three for a setting of 7/1000; 13 for a setting of 10/1000; four for a setting of 12/1000; no one voted for a setting of 17/1000. For weaving yarns, only one intimated a desire for a setting of 7/1000 of the feed plate; 13 said they preferred 10/1000; 12 wanted a setting of 12/1000; and seven wanted a setting of 17/1000.

J. W. Cates, superintendent, Edenton Cotton Mills, Edenton, N. C., said that he thought the number of yarn should be specified before stating which setting would be good to give any of the three factors desired. C. S. Tatum said that he did not think the yarn number would have any bearing on the setting whatsoever.

G. F. Brietz.

J. W. Cates.

He asked for a show of hands as to how many would change their settings if they made a change in number. No one expressed a desire for changing settings with a change of numbers.

Mr. Tatum asked W. D. Lawson, superintendent, Ethel plant, Eastern Mfg. Co., Selma, N. C., how he kept from facing his card clothing with his flats set

Card Settings as Submitted by Nine Members at the Selma Meeting of the Eastern Carolina Division of the Southern Textile Association.

Name of Person	Licker-in to Feed Plate	Licker-in to Cyl.	Back Plate to Cyl. Top	Flats to Cyl. B.	Flats to Cyl. F.	Doff to Cyl.	Screen to Cyl. B.	Screen to Cyl. F.	Mote Knives to Licker-in	Licker-in Screen to Licker-in
F. L. Craven	10	7	22	11	11	7	22	22	12-10	--
E. M. Holt	17	7	17	9	9	7		12	10	29
C. A. Davis	12	7	17	9	9	7	17		5	
J. W. Day	10	7	17	11	10	7	17	34	5	
M. R. Vick	7	7	19	10	10	7	34	⅛	5	12
W. D. Lawson	7	7	22	7	7	7	17	⅛	5	17
C. O. Morris	10	7	22	9		7	34	68	5	22
G. W. Thompson	12	7	24	10		7	24	⅛	7	⅛-17
J. T. Huneycutt	7	7	24	7-9	7-9	5	34	34	5	34
Standard Settings	5	5	17	9		5	22		5	34

M. R. Vick.

D. W. Knight.

C. A. Davis.

to the card cylinder with a number 7/1000 gauge. Mr. Lawson said that his cards are on a very solid foundation, and that his card clothing is put on very tightly.

It was next decided to take a vote to find the correct setting of the flats to the cylinder, cleanliness, strength and evenness being considered. There were two who voted for a setting of 7/1000; 30 voted for a setting of 9/1000; only one voted for a setting of 10/1000; and no one voted for a setting of 11/1000. A setting of 9/1000 was very near a unanimous choice.

A show of hands revealed that none preferred a setting of 17/1000 in setting the screen to the cylinder; four thought 22/1000 to be a good setting; only one voted for a setting of 24/1000; and ten voted for a setting of 34/1000.

It was pointed out that practically all preferred a setting of 5/1000 in setting the mote knives to the licker-in.

E. M. Holt, superintendent, No. 1 Mill, Erwin Cotton Mills, Durham, N. C., was called upon to give a report of some tests that he had made, experimenting with different settings of the feed plate and licker-in. He stated that he had made four different tests.

He used ⅞-inch to 1-inch cotton in all four of the tests, the grade of his cotton being Strict Middling. He was making an 11½-ounce lap, 54-grain sliver, carding 11½ pounds per hour, and was on sheetings.

In Test No. 1, instead of having the feed plate and licker-in set to a 17/1000 gauge, he had them set to a 10/1000 gauge. His yarn sized 21.63s. He said these settings of the feed plate and licker-in gave him breaks of 75¼ pounds for his yarn, and that the per cent waste (less reworkable) ran to 4.24 per cent.

In Test No. 2, he changed his feed plate setting back to 17/1000 and changed his flats from a setting of 9/1000 to a setting of 10/1000. This gave him a breaking strength of 72¾ pounds, and a waste percentage (less reworkable) of 3.78. His yarn here sized 22.41s.

In Test No. 3, he set both his feed plate and flats to a gauge of 10/1000. This gave him a breaking strength of 68¾ pounds, and his waste (less reworkable) ran 4.93 per cent. His yarn in this test sized 22.61s.

In Test No. 4, he set his feed plate to a 17/1000 gauge and his flats to a 9/1000 gauge. Here he obtained a break on his yarns of 76¾ pounds, and 4.97 per cent waste (less reworkable).

Mr. Holt pointed out Test No. 3 gave him the highest percentage of flat strips, Test No. 4 the highest per cent of waste, Test No. 2 the lowest per cent of waste, while Test No. 4 gave the best breaking strength. He said that the relative humidity at the time of breaking the yarn was 60 per cent.

In answer to a question by Mr. Lanier as to what his card draft was, Mr. Holt replied 93.77.

Card Clothing.

The next question discussed was card clothing. Mr. Lanier here brought out that he would like to hear some figures and facts concerning tests made on the different kinds of card clothing. He said he was very anxious to learn something about results that were being obtained with straight wire clothing.

C. A. Davis said that on some tests they had run on straight wire and regular wire they had found that they got 11 per cent less cylinder and doffer strips with the straight wire than with the regular wire. He said they strip the straight wire once a week, against 16 times a week for the regular wire. He said, however, that they got considerably more flat strips off of the straight wire. C. S. Tatum said they had found it necessary to set closer, which no doubt was the reason for the larger percentage of flat strips on the straight wire.

C. S. Tatum here gave the results of a test that he had run on straight wire and regular wire. (Mr. Tatum's complete text appears on page 913.) In discussing the test, Mr. Tatum said even though he obtained less variation in yarn numbers on the straight wire, and that regardless of the fact that the straight wire gave him better breaking strength, he would advise anyone to experiment on a small scale with it before putting in wholesale lots of it. He said there was some doubt in his mind as to the life of it.

Mr. Davis said he liked the old clothing mighty well.

J. T. Hilton, associate professor of carding and spinning, North Carolina State College, Raleigh, N. C., stated that he was certainly pleased with the results he has been getting with metallic card clothing. He said that tests had shown that he gets about four pounds more strength with the metallic clothing than he does with the regular wire. Asked how often he stripped this metallic clothing, he replied once a month, and pointed out that by once a month he meant a month of running time, which really constituted about eight months there at the school. In answer to a question by Mr. Burns as to the age of the regular clothing, Mr. Hilton said it had been installed about 1½ years.

Mr. Lawson said that he had found the metallic clothing to give about two pounds better break than

D. F. Lanier.

J. O. Creech.

J. H. Clark.

C. M. Black.

V. H. Carr.

the regular clothing, and that he stripped once every 24 hours.

A short talk by Walter C. Taylor, secretary of the Southern Textile Association and Arkwrights, Inc., on the importance of the different members of the Southern Textile Association co-operating with the Arkwrights, concluded the morning discussion. The meeting was then adjourned to partake of part of the generous hospitality exhibited by the city of Selma in the form of a luncheon at the Kiwanis club and hotel.

Talk on Humidification.

The afternoon session was opened by a talk by Horace Morrison, engineer, American Moistening Co., Charlotte, N. C., on humidification, which is reproduced in large part on page 914.

Cleaning Spinning Rings.

J. W. Cates, superintendent, Edenton Cotton Mills, Edenton, N. C., conducted the afternoon discussion, and the first topic to be discussed was the cleaning of spinning rings. Mr. Cates said they used to clean their rings with live steam and soda ash, and that they would then polish them by holding them in a holder, similar to a lemon squeezer, against a revolving leather wheel which had whiting sprinkled upon it, stating that this gave very good results.

Mr. Knight, of Rocky Mount, told of the importance of having the gum and oil off of new rings in starting on new rings. He also advocated the use of whiting for polishing rings. He pointed out that a different traveler should be used for a new ring.

J. O. Creech, overseer spinning, Selma Cotton Mills, Selma, N. C., said they had found kerosene, gasoline and a revolving brush very good for cleaning rings.

J. W. Cates pointed out that one of the biggest problems connected with new rings is the determining of the correct size traveler, telling of how too heavy a traveler will cause undue cutting of the rings. He said that he had used a No. 2 circle traveler for a two flange ring, but that he now uses a No. 1½ circle for a two flange ring and gets much better results. Speed of spindles, twist, size of bobbin, and many other factors should be taken into consideration in choosing the correct size traveler to use, he said.

(*Continued on page* 957.)

L. V Andrews.

W. D. Lawson.

C. S. Tatum's Test on Cards

Straight Cylinder Wire vs. Regular Wire, Weeks Ending Feb. 8th and 15th

(Ran test on same number of cards each for two weeks, keeping all weights of waste, etc., separate.)

	Cylinder Only			
	Straight Wire Test		Regular Wire Test	
Staple cotton 15/16"	No. 1 1st Wk.	No. 2 2nd Wk. (See note)	No. 1 1st Wk.	No. 2 2nd Wk.
Hours test run	40	40	40	40
Number of cards run in test	3	3	3	3
Number of laps fed to cards	45	42	42	42
Weight of laps per yard	14.4	14.4	14.4	14.4
Grain sliver produced, Standard Draft of Cards	58	58	58	58
Total weight of laps fed	1803.4	1700	1731	1642
Waste made—				
Doffer strips)				
Cylinder strips)	1	1.8	9.14	10.2
Flat strips	46.3	26.14	40.11	39.12
Fly waste	30.15	27.8	22.15	21.2
Waste Total	78.2	55.14	73.8	71
Total weight sliver produced	1635	1588.15	1621.3	1552.4
Weighings of stock produced: Weigh from end to end one can of card sliver from each test card, each day; also weigh drawing, same. Roving and yarns, as stated.				
Results:				
Card sliver—				
Average grains	57	59.2	56	57
Heaviest	63	61	70	66
Lightest	54	56	53	53
% Variation	14%	8%	30%	22%
1st Drawing—				
Average grains	66	67	66	68
Heaviest	67	68	68	69
Lightest	64	64	62	62
% Variation	4%	5%	9%	10%
2nd Drawing—				
Average grains	70	70	69	69
Heaviest	71	71	71	71
Lightest	70	69	67	66
% Variation	1%	2%	6%	7%
Slubber (12 bobbins) (4 weighings from each bobbin)—				
Average hank	.45	.45	.45	.46
Heaviest	.44	.44	.44	.45
Lightest	.46	.46	.47	.46
% Variation	3%	3%	6%	2%
Intermediates (Same as slubbers)—				
Average hank	1.10	1.06	1.09	1.08
Heaviest	1.08	1.04	1.06	1.05
Lightest	1.12	1.09	1.12	1.11
% Variation	3%	5%	5%	6%
Speeders (Same as slubbers)—				
Average hank	3.21	3.16	3.29	3.20
Heaviest	3.10	3.03	3.10	3.08
Lightest	3.33	3.26	3.33	3.33
% Variation	7%	7%	8%	8%
Yarns (Weight 20 bobbins— 4 weighings from each)—				
Average No.	21.72	20.68	21.44	21.5
Heaviest	20.72	19.65	20.66	20.41
Lightest	22.62	21.58	22.62	22.22
% Variation	8%	9%	9%	8%
% Over standard weight	55%	25%	71%	56%
% On standard weight	7%	14%	3%	10%
% Under standard weight	38%	60%	26%	34%
Breaking strength, pounds—				
Average	73	73	70.5	74
Heaviest	75	80	81	82
Lightest	62	65	63	66
% Variation	1%	2%	3%	3%

Remarks as to cleanliness of work, condition of cards, variation in settings, etc.

All cards were set the same. The flats were in good condition. The fillet on cylinder and doffer were good, except on one card having regular wire. Some of this was breaking out.

There was no difference noted in the cleanliness of either experiment.

On the second test, on cards with straight wire we slowed the flats down to one-half regular speed.

There proved to be more fly and invisible waste on the straight wire.

Same gears on all frames.

Showed best test with flats running standard speed.

Humidity *and* Humidification

A Discussion of these Subjects, Telling What They Are; How Produced; and Emphasizing the Importance of Care and Cleaning

By Horace Morrison
American Moistening Co.

THIS IS an elementary and interesting discussion of what humidity is, how it is produced, and the various types of equipment, with notes on each. These remarks are taken from a paper prepared by Mr. Morrison and delivered at the Selma, N. C., discussion meeting, which is reported on another page of this issue.

Mr. Morrison discusses also the subject of ventilation, and closes with some pertinent remarks as to the importance of proper cleaning and care of humidifying systems in order to secure continuous satisfactory operation.—THE EDITOR.

WE ALL KNOW that humidity is water vapor, but perhaps few of us realize that it is really cold steam and that this vapor behaves according to definite physical laws. More or less of this vapor is always present in the atmosphere and it is extremely difficult to get entirely rid of it—or to get perfectly dry air. That fine white mist we see issuing from humidifiers, steam lines, etc., is water in the form of fine particles and is not yet evaporated. When it evaporates it becomes invisible.

Each cubic foot of space is capable of holding a definite maximum amount of this invisible vapor independently of the presence of air and other gases. This maximum amount depends only on the temperature of the space and increases rapidly with increasing temperature approximately doubling with each increase of 20 degrees F. through the ordinary working temperature range.

When a space contains the maximum quantity of vapor for its temperature it is said to be saturated and any attempt to force more vapor into it will result in a fog which will settle in the form of condensation on surrounding objects.

Saturated conditions are seldom used in textile plants, outside possibly, of conditioning rooms. However, there is a point of interest that might be mentioned in passing. When handling saturated air we must be careful to maintain a constant temperature, for, with any rise in temperature, the air or space becomes partly saturated due to the increased capacity for vapor. And, conversely, when the temperature of saturated air is decreased some of the vapor is squeezed out in the form of condensation and while we will still have saturation our volume of vapor is reduced.

In ordinary humidifying practice we use air as a vehicle to transport the vapor because it lends itself readily to our purpose. Hence, it has become second nature to consider humidity as a part of the air.

In textile mill processing we use partially saturated conditions ranging from 40 to 85 or 90 per cent of saturation or 40 to 90 per cent relative humidity meaning: relative to the maximum or saturated condition. As the absolute quantity of vapor varies in volume with the temperature so also does the relative humidity. In other words, with a temperature of 75 degrees F. and a relative humidity of 60 per cent we have a definite quantity of vapor in each cubic foot of space. When the temperature increases to 80 degrees F. we must add more vapor to maintain 60 per cent relative humidity.

Relative humidity has become an important term in cotton mill practice for the reason that cotton regain and relative humidity curves are practically parallel over the ordinary working ranges of humidity and temperature and it is so much quicker and simpler to determine the humidity than to measure the cotton regain—which requires the drying out of samples.

There are a number of ways of producing water vapor or humidity. Nature is constantly evaporating water from the surface of pools, rivers and oceans wherever water is exposed to a partially saturated atmosphere. Even the rain drops in passing from cloud to earth give up a part of their volume in transit.

How Humidity is Produced.

Wherever evaporation is taking place heat is being exchanged, whether this happens from the surface of a pool, from a humidifier head or in a steam boiler. This heat required to change the physical state from water to vapor is known as latent heat. When the reverse process takes place, that is, when vapor condenses, heat is given off. This is the principle of steam heating radiators.

Approximately 1000 heat units or B.t.u. are absorbed in the process of evaporating one pound of water.

In the old days it was customary to run a line of steam pipe along the columns of a mill and discharge live steam at low pressures from a series of ports in the pipe. While this did release vapor to the atmosphere it also added the heat of the steam and did not utilize the cooling effect of evaporation as it had absorbed the necessary latent heat from the fire under the boiler.

Sprinkling the floors was also done but evaporation was not rapid enough in the cool strata of air near the floor, not to mention the other faults of this method.

The failure of these methods led up to the present day types of humidifying equipment, namely: the atomizer type; the spray or sectional type; the fan type; and the central station type.

A brief description of the types will serve to draw out their principal features.

The atomizer uses compressed air to break up a jet of water into fine particles and the force of the air is used to distribute this spray over an area large enough for the particles to evaporate in the drier air. This discharge of compressed air also creates a small amount of circulation of the room air.

The sectional or plain spray type uses water under high pressure for its motive force. The small stream of water striking the nozzle pin at high velocity is broken up into a conical spray inside the head casing. This conical spray draws a quantity of air through the casing which picks up the finer and lighter particles and discharges them radially at the bottom. Any dust or lint in the air entering the head is washed out by the coarse part of the spray and carried through the return system to the filter tanks.

The fan head is similar to the sectional type in its method of producing the spray. The motor-operated fan increases the volume of air washed through the spray and also gives a higher outlet velocity and a consequent larger evaporation and effective area for distribution.

These high capacity units are the answer to the demand for extremely high evaporative capacities where heavy power is used and large quantities of heat given off by machinery.

The central station type of system consists of a large air washer or humidifier together with proper heating equipment and a large centrifugal fan to distribute the conditioned air to the various departments through a system of flues. The air delivered to each department in a predetermined volume contains sufficient moisture so that when mixed with room air the required humidity will result. A portion of the room air is drawn back to the fan room and either mixed with the fresh outside air or discharged, depending on out-door conditions.

With the atomizer and head system the water is all evaporated in the room where the heads are located and heat for evaporation is taken from the surrounding air. Thus the cooling effect is secured within the room, or portion of the room where machinery is producing the heat. With the central station system the warm moist air is drawn from the room and the heat removed in the washer.

Ventilation.

All properly designed humidifier systems today take into account the power used in a room, particularly spinning and twister rooms where the power consumption is relatively high.

In such high-power rooms where there is ample humidifying equipment, ventilation is necessary to keep the proper conditions. The popular idea of ventilation seems to be to open all windows and transoms that are movable. To do this means that even with little or no breeze, the humidity will float out to the drier out-doors.

Consider for a moment the question of vapor pressures. The vapor present in the atmosphere has a certain pressure which is a part of the barometric pressure. On dry days the vapor pressure is comparatively small. Now, when we build up the humidity indoors, we increase the vapor pressure and for the proper conditions in a spinning room it will frequently amount to twice the outdoor vapor pressure. What happens when the windows are opened indiscriminately? What would happen to a steam boiler, an air receiver or any pressure vessel if the nozzle were left wide open? The pressure inside would flow out until it was equal to the atmosphere. And that is what happens there.

In the case of the steam and air lines we do not open the valves any more than necessary to perform the job at hand. If we did we would be wasting money as well as losing pressure. The humidified room is analogous to the pressure vessel. The equipment cannot build up pressure with the windows wide open and the humidity which has cost money is pouring out.

Now, the windows should be adjusted to regulate the flow of humidity and to permit the hot moist air to flow out and sufficient dry air that is capable of being humidified to enter the room. On the side of the room toward the wind the windows should be opened very little and at regular intervals. While those on the side away from the wind may be opened more liberally, particularly near the hot portions of the room.

An index of proper conditions would be to observe the operation of the automatic controls. Should they have the humidifiers in operation continuously it is an indication of too much ventilation. Should they have the humidifiers off for long periods and the room too hot it indicates too little ventilation. A good proportion would be for the humidifiers to be in operation 80 or 90 per cent of the time.

Cleaning and Care of Systems.

The proper care of a humidifying system consists mostly of cleaning and too much emphasis cannot be laid on this feature. When we consider that all the room air is passing through the humidifier heads at a rate of several times per hour and that the dust and lint contained in this air are moistened and taken out by the wetting, then we can easily account for the condition a system gets into a few days after cleaning. A large amount of this waste matter passes through the return pipes to the filter tanks. There it is trapped and accumulates until removed by washing. Needless to say, this should be done thoroughly and at regular periods.

The same is true of the heads. Lint and dirt collect inside and regular thorough cleaning is necessary if the full benefits are to be obtained from a system. We too frequently find that the cleaning is slighted—it is a nasty job—the equipment will be cleaned nicely on the outside, but slighted inside, resulting in improper delivery of the vapor and, of course, a reduced return on the investment.

It requires patience to get the proper results in this matter and some responsible employee should have charge of this branch and make it his duty to see that the work is done thoroughly.

Finally, there is hardly any equipment that can be installed in a mill that will give a better return on the investment than a properly designed and properly operated humidifying equipment.

CURRENT TOPICS

Talk of the Month

WHAT IS ONE to think when he observes such a distribution organization as a five-and-ten-cent store advertising special sales? Truly it seems time to call a halt. If anything can be offered at "bargain" rates from the five or the ten-cent limit, competition must be beyond all conscience. Yet such was the fact in a metropolitan store of this kind and presumably through the chain of the company managing this store. And we recall that the emphasis of demand after Easter among silk buyers for the retail trade was for special lots to offer at a price for stimulation of consumer demand.

For a long time the manufacturing industry has suffered from the policy of retailers in every line looking for unfair—for that is the truth of the matter—bargains in order to pursue the uneconomic practice of offering the public not exactly "something for nothing" but at any rate something exceptional in value, if not below cost. The manufacturing element of the country is working hard for stable conditions, but herein is one of the obstacles. The retailer does not want to carry finished goods indefinitely, especially in a day when style changes rapidly, but "sales" are not run merely to get rid of slow-moving merchandise. They are regular practice.

This condition is uneconomic and so recognized by some of the very people who, under stress of competition participate in the practice, just as manufacturers who have deplored unreasonable operation of mills have felt compelled to run their mills day and night to keep others from gaining an unfair advantage which would accrue to them if they had the field alone. The cotton mill industry has been subject to pressure from buyers ever since the short period of inflation when price was a secondary consideration. The program for regulation of goods production may be not only a stabilizing move but a kind of retaliation of pressure against buyers who seek to get goods at price levels which allow them to offer consumers merchandise below a reasonable basis above manufacturing and distributing costs.

At the outset of the current period of depression the Wool Institute called it forcibly to the attention of manufacturers that a firm price policy was the only reasonable way to do business with hesitant buyers; that unreasonable price-cutting would only unsettle buyers the more. This is the rule of trade. It would be presumptuous to criticize mills in any branch of the textile industry for such price reductions as have been made this year, for of course the drastic declines in raw materials demanded adjustments in the converted products. Undoubtedly the period has been a difficult one for making prices at all.

But a halt to unethical competition is the way to bring back order, together with a regulation of production which will make buyers realize that they face a stable market and must place orders ahead in reasonable volume if they want to be properly prepared for a season over the counter. It was a tailoring factor who, in the middle of April, spoke from his own buying experience to the effect that the mills were keeping the industry unstabilized and preventing anybody from operating with confidence. He made this pointed comment: "The mills should realize that the only person benefitting through 'throat-cutting' is the consumer, who gets a better value for his money, but who in all likelihood is buying at a definite price level and would buy in any event."

This comment has most important bearing on the current situation from two angles: the attitude of buyers of goods from the mills and the ultimate consumption. The impression still holds general that the fall will bring a broad improvement in business, all round. Whether buying will be stimulated by the new low level of prices for raw materials remains to be seen, but in any event it is sane to produce only what may reasonably be forecast as the volume likely to be consumed. The mills thus can convince buyers that procrastination will not avail them anything and perhaps even exercise some restraint upon the false economic practice of "sales" distribution. What the consumer will buy at a profit in the long run should mean about the same volume for mills and retailer as that handled in the old uneconomic manner.

Textile Industry Not Archaic.

Meantime, the cotton industry has at least given notice to the world that it is not archaic, but can adapt itself to modern conditions. In fact the industry today is suffering from conditions outside itself of a character for which cotton manufacturers have been severely criticized. As the National City Bank of New York states, in its monthly bulletin, "the world is obsessed with the subject of rivalry and competition, instead of thinking of co-operative trade. The cotton, or any other, industry hardly can be censured for operating primarily on the basis of competition when one considers the time-honored attitude of the Government toward co-operation and even its present disposition toward activities of trade groups. Even while the cotton industry is making a great test of co-operative effort toward stabilization, Government scrutiny of the modern tendency has been keeping trade associations guessing as to what may be legal and what not.

There may be tacit recognition through the Pequot plan that another criticism of the industry is a just complaint—the argument of some observers that cotton mills will not be modernized until they place their workers on a higher standard and pay them wages commensurate with the basis in other leading industries. For years the manufacturers of textiles have realized the possibilities of greater production per man power, but the method for adjusting mills and work-

ers to new standards has been an elusive problem.

Proposals that the workers take on more machines have been accepted as a move against labor, when made without consultation with the latter. The importance of co-operation between employer and employee perhaps was never better exemplified than in the current instance. The Pequot management took the workers into its confidence in inaugurating an experiment as to how much work a skilled operator could do. The stretching-out system is a method which antagonizes operatives, but a scientific plan which gives the skilled worker a better grade of work, better wages and a "human" allowance of relaxation may produce something even better than anything which has been consummated in industries already well known for high standards of production.

King Cotton Has a Wife.

King Cotton has taken to himself a wife, so to speak. The Cotton Textile Institute recently reported that sixty-five per cent more style dressmakers were using cottons this year, thus indicating that the long promised exaltation of such fabrics to an eminence never before attained will be confirmed this summer. So after a long and "baleful" reign as the king of raw textile fibers, Cotton is extending his kingdom through an alliance with Madame Finished Fabric, educated to a standard befitting a queen in the school of style and design. Queen Cotton already has been accepted by the arbiters of Fashion in Paris.

That the fostering of style and design, better trade practices, regulation of production and dissemination of practical knowledge for the broad benefit of the industry is being ably conducted by the Cotton Textile Industry appears in the rallying of new units to its support. Recent announcements have reported the alliance of the Cannon, Bibb and the Avondale organizations with the Institute. The spindleage represented has been expanded by more than 2,000,000 since the annual meeting in October. Another form of co-operation which may bear good fruit is the establishment in New York of the Council of Textile Association Executives, for it is a group to represent all branches of the textile industry and to exchange information on common problems.

Once more the "merchandising merger" idea, in contrast with the outright consolidation of mills, has come up for discussion and the future of the inevitable centralization of forces may be along varied lines. Fred W. Shibley, vice-president of the Bankers Trust Company of New York, at the Pinehurst convention of the American Cotton Manufacturers Association, expressed belief "that the desirable ultimate of the cotton textile industry is to be attained through the consolidation into definite groups of mills representing specific lines of merchandise." But he also made the statement that "the present is not a propitious time for such mergers."

Furthermore, he said. "The profits are not such as to attract bankers or investors if invited into the situation. Without banking co-operation it would be extremely difficult to effect such mergers. It is required, therefore, in order to restore the industry to a profitable basis where it may invite rather than solicit banking support, that a co-ordination of production and sales shall be effected and maintained over a reasonable period, thus stabilizing prices."

It strikes us that the cotton industry, if it took measures which restored the industry to a profitable basis, without the aid of bankers, would be rather fatuous to "invite them into the situation" to share those profits. Meantime, a combination of interests has been effected through the Cotton Textile Institute which it may be hoped will cope with the problem of adjusting production to consumption, all the time each unit remaining independent. There is left the selling problem, wherein such combination obviously is impossible but in which cooperation or consolidation by groups is imperative.

While outright consolidation is becoming acceptable to some manufacturers, others are not convinced that the well managed unit of moderate size would do well to sink its identity in a large organization. They of course feel the need of support in coping with the new conditions in the market, especially the strong position of buying forces which have been developed into syndicates and other large groups. Yet it is possible that the consolidation idea may overreach and the efficient individual mill unit which has developed an elastic plant to meet the varying demands of the merchant may well choose the perhaps elastic "merchandising" merger and maintain its own integrity.

What the Southern Mills are Doing

LANETT MILL, West Point, Ga., recently completed installation of 9 units of Firth-Smith bunchless automatic cleaners to serve their Universal high speed warpers.

The Sibley Mfg. Co., Augusta, Ga., has installed the "Breton Minerol" process, oil-spraying equipment, for spraying both white and colored yarns.

All of the machinery of Darlington Textile Co., of Pawtuckett, R. I., is being shipped to Newton and Charlotte, N. C., to be installed in the plants of the company in those two cities.

The Pilot division of the Consolidated Textile Corp., Raleigh, N. C., has been reported making rapid progress with the installation of new machinery, as well as good progress in overhauling carding, spinning and weaving machinery. The mill is now making chambrays and shirtings, but will start immediately the manufacture of furniture covering material, denims and playwear suitings.

Clinchfield Mfg. Co., Marion, N. C., have just finished improvements they have been making on its two mills, which included dressing rooms, new roofs, etc. The homes in the mill village are also being renovated and repainted. The company is now on a full time day and night schedule.

Ruby Cotton Mills, Gastonia, N. C., recently installed a complete set of "Breton Minerol" process equipment, purchased from Herbert Hinckley, Inc., Charlotte, N. C., representative for Borne Scrymser Co.

The Clara Mfg. Co., Armstrong Cotton Mills, and Dunn Mfg. Co., of Charlotte, N. C., have been combined under the name of American Combed Yarn Corp.

Erlanger Mills, Lexington, N. C., have installed 3 complete sets of automatic spooling and high speed warping machinery.

Mooresville Cotton Mills, Mooresville, N. C., are now doing their own dyeing, bleaching and finishing besides manufacturing their own yarns, thus making the plant a complete unit.

Plans are being made for improvements to the warping and twisting facilities at the Carolina Dyeing & Winding

Co., Mount Holly, N. C.

Additional roving machinery has been installed at the Amazon Cotton Mills, Thomasville, N. C.

Machinery and equipment have been installed at the Southern Mercerizing Co., Tryon, N. C.

Andrews & Goodrich, drying experts of Boston, have been reported installing five drying systems for tenter frames, including their special insulated housing and Sturtevant silent vane fans at the Union Bleachery, Greenville, S. C.

Kattermann & Mitchell Co., of Paterson, N. J., who purchased the Lola Gingham Mills at Stanley, N. C., are planning on moving more machinery South in the near future.

Wadsworth Mills, Spartanburg, S. C., were purchased by I. W. Gray, of Woodruff, S. C., for $39,000, at a recent receiver's sale. The plant, which has 11,392 ring spindles and 5,000 twister spindles, is equipped for the manufacture of combed and carded yarns.

Whitney Mfg. Co., Whitney, S. C., has been reported as making rather extensive improvements to the housing facilities of the mill village.

It has been announced that U. S. Rubber Co. will spend $200,000 on increasing the production facilities of Winnsboro (S. C.) Mills. Their tire cord production will be increased 17 per cent by July.

Camperdown Co., Inc., Greenville, S. C., has been organized to take over the Camperdown Mills, which have been in hands of creditors. The new company will have a capital of $300,000 and will continue to manufacture ginghams and other colored goods. Sidney Bruce will be president and treasurer.

Martinsville Silk Corp., Martinsville, Va., manufacturers of georgette and crepe de chine, have ordered new looms, winders and twisters to be installed within the next few weeks; 30 looms for the manufacture of satin will also be installed.

Machinery is now being installed at the third unit of the American Silk Mills, Inc., Gordonsville, Va., and when complete, the plant will have reached its capacity. There are now about 175 persons on the payroll.

Brucetown Woolen Mills, recently destroyed by fire, will build a much larger plant at Clearbrook, Va. It is announced that this mill will be equipped with the very latest and most up-to-date machinery.

Haber-son Mfg. Corp., of New York, which recently acquired the International Shirt Mfg. Co., with plants at Bluefield, Va., Bluefield, W. Va., Princeton, W. Va., and Pocahontas, Va., will resume operations at an early date.

Cotton Comment by H. & B. Beer

New Orleans, May 17th, 1930.

COMPARED with April 12th, old crop contract values show slightly lower, and new crop contract values are moderately lower. The July position, which at one time sold at a premium of about 192 points over October, lost much of its premium during the past fortnight; it commanding a premium over October today of about 95 points.

The shrinkage in the July premium was partly attributed to more cotton than generally expected being tendered on May contracts, to some reversing of straddles, some liquidation, and owing to new crop months ruling comparatively the stronger of late as result of complaints of too much rain in the Southwest and in parts of the central belt. Recently the certificated stock at delivery points was reported as 483,000 bales.

During the past month sales of spot cotton at reporting southern markets were very small, representing a very poor demand, but much spot cotton is being delivered on May contracts. The receiving of so much cotton on contract for account of agencies sponsored by the government has made an outlet for the staple, which otherwise would likely be depressed in value for want of a demand. What the co-operatives propose to do with this cotton remains to be seen, and it is for that reason much interest is centered in the July position which will probably attract more attention after May has expired. In this connection, a news item, recently published, was considered significant, to the effect that Mr. Carl Williams gave assurance at a recent Memphis conference that there will be no dumping of cotton of the 1929 crop by the co-operatives on an unwilling market.

Bearish statistics, unfavorable foreign and domestic trade advices, an unfavorable monthly domestic textile report, an unfavorable British Board of Trade report, and bearish domestic returns for April, were without much influence on values. The attitude of the co-operatives and complaints of too much rain in much of the Southwest and in parts of the central belt served as sustaining features of the situation the past week.

ASSOCIATION OF COTTON TEXTILE MERCHANTS OF NEW YORK APRIL STATISTICS.

Yards—	April 1930 4 Weeks	March 1930 4 Weeks	April 1929 4 Weeks
Production	257,243,000	261,403,000	283,878,000
Sales	223,225,000	292,249,000	202,520,000
Shipments	253,360,000	265,675,000	277,098,000
Stocks	444,736,000	440,853,000	352,091,000
Unfilled orders	357,328,000	387,463,000	430,298,000

April sales of domestic cotton goods were 86.8 per cent of production, and shipments were 98.5 per cent of production. Stocks at the end of April increased nine-tenths of one per cent, and unfilled orders decreased 7.8 per cent.

CENSUS REPORT

United States— Bales—	This Season	Last Season
Consumption lint, April	532,382	631,802
Consumption, linters, April	66,951	79,543
Consumption, inc. linters, April	599,333	711,345
Consumption lint, 9 months	4,855,999	5,305,836
Consumption linters, 9 months	618,534	641,642
Consumption inc. linters, 9 months	5,474,533	5,947,478
Mill Stocks April 30th	1,667,394	1,606,412
Stocks in pub. stg. & whs. April 30th	3,636,296	2,524,621
Stocks in mills, pub. stg. & whs. April 30th	5,303,690	4,131,033
Active spindles during April	28,860,382	30,911,416

In early May it was announced that many Southern mills will curtail mill production by about 50 per cent until early in July. Other manufacturers, it is said, were inclined to follow the example thus set, and it is believed that it will be a summer of comparative placidity in the cotton textile industry.

Garside's Figures, Linters Not Included: American cotton— Bales—	This Season	Last Season
World's consumption in March, estimated	1,074,000	1,291,000
World's consumption, 8 months, estimated	9,238,000	10,147,000
World's stock, in all hands March 31, about	9,861,000	9,878,000

Garside stated further: "Present indications point to a somewhat smaller consumption during the last four months of this season than in corresponding four months of last season.

As to new crop conditions and prospects, private acreage estimates of late indicate a smaller decrease than expected earlier in the year, now ranging from about 2.6 per cent to about 5 per cent, averaging about 3.8 per cent. There appears to be following the recent generous rains, ample moisture in the ground in practically all sections of the belt, except, perhaps in parts of the South Atlantic States, but more rain is indicated for the eastern belt. In the Southwest and in the central belt a period of dry, warm weather is desired to permit of favorable progress of farm work.

According to the National Fertilizer Association sales of fertilizer tags for April and from December to April inclusive, in the Southern States (exclusive of Mississippi) were as follows:

Short Tons—	This Season	Last Season
April	1,280,274	1,258,894
December to April inclusive	4,541,549	4,587,999

The substance of Washington's summary, for the week ended Tuesday, May 13th, was as follows: "Rain is still needed in the eastern cotton belt, but in most central parts good rains were very beneficial, while much of the west is now too wet."

WORLD'S VISIBLE SUPPLY OF COTTON MAY 16th.

Bales—	This Year	Last Year
American	4,067,264	3,471,392
Other kinds	2,672,000	2,404,000
All Kinds	6,739,264	5,875,392

New England Mill Situation

May 18, 1930.

FURTHER ADJUSTMENTS of production to demand have been taking place during the past few weeks among the mills in New England. The various fine goods centers have been gradually reducing their output and in so doing have enjoyed the co-operation of a great percentage of looms weaving fine stuffs not only in the New England area, but in the South also. Officials of some of the larger producing units declare at the present time that New England fine goods production and fine goods production as a whole was never better controlled than at the present time, and that it has been cut down to about 66 per cent of capacity. Efforts are now going forward to bring about further curtailments.

Fine Goods Mills Operation.

In common with mills in other divisions of the industry, fine goods mills are currently dependent to a large extent on hand to mouth operations which necessitates the carrying of stocks on many of the staple constructions, both in combed cotton goods and in the plainer rayon fabrics. Their customers particularly during the current season have operated very cautiously and have been loath to place large contracts. Mills have consequently been required to carry sufficient stocks to take care of spot and quick deliveries. This has resulted in spots being frequently available at less than contract prices, although it is to be said for producers of most staple cottons that they have succeeded in recent weeks in preventing further declines in prices, and even spot levels have been more regular in the past few weeks for a long time past.

Trend to Finer Cloths.

The reductions in prices of fine denier rayon yarns which became effective just recently have been a disturbing factor in the marketing of the products of some of the New England mills. Some intimation that these reductions were coming caused considerable selling of crepes and other descriptions at low prices, although values have been steadily maintained on 150 denier and heavier goods. New England mills are reported to be working into a heavier production of fine denier crepes and fancies in plain, dobby, and Jacquard weaves at the present time, and there are a considerable number of cloths which are coming strongly to the front out of the welter of experimentation. In the long run the mills feel that they will be benefited by the reductions, although some have been stranded with some low denier rayon fabrics which they are having difficulty in selling at cost of production.

The swing of the New England industry into production of finer cloths continues unabated, particularly among some of the smaller and independently owned establishments. Extremely fine and costly Jacquard work, duplicating the best of English and Continental cloths, is being done in some of these mills, and some are booking contract business on drapery, bedspread, lining, and dress fabrics of extra qualities with production costs that range from about 40 cents to well above $1 per yard in the gray.

Research and the Institute.

Due to the many difficulties arising in manufacturing processes, particularly in these cloths and in fabrics using various mixtures of natural and synthetic fibers, it is significant that the New England industry is joining in wholeheartedly in the program of the Textile Research Council of Boston, which received the endorsement of many leaders at its preliminary meeting in Boston previous to the convention of the National Association of Cotton Manufacturers early this month. Southern organizations are also working in support of its plan.

No current discussion of the New England industry would be complete without some mention at the present time of the Cotton Textile Institute, whose policies came under the fire of criticism at the Boston convention. It appears that in the New England industry there is some dissatisfaction with the Institute, and a feeling, despite the evidence of promotion of fine cotton goods largely made in New England which George Sloan submitted to the convention, that the Institute has failed satisfactorily to serve the New England industry. It is significant, however, that some leaders of New England cotton goods opinion have since declared that, while some criticism of the Institute may have been well founded, fundamentally the Institute's program was sound and had probably been too severely attacked.

Individual Mill Notes.

The Berkshire Fine Spinning Associates have been selling their production on curtailed basis during the period, although some weeks have been slightly off. Their reports of curtailment progress and the co-operation of most mills have been encouraging. They contemplate some further degree of curtailment. The matter of the Parker Mills is at length being straightened out, adjustments being made with bondholders, and stockholders have authorized directors to accept the purchase offer of the Berkshire Associates. Transfers are nearing completion and steps to dissolve the Parker corporation will shortly be taken.

Parker stockholders are to receive 1¾ shares of Berkshire no par common and 1/10th share Berkshire preferred for each share of Parker preferred, and ¼ share of Berkshire common for each share of Parker common. Bondholders will receive 9 shares of Berkshire 1 per cent cumulative convertible preferred of $100 par for each $1,000 face value Parker and Hargrages bond. Berkshire's original offer was 7¾ instead of 9 shares for each bond.

In New Bedford sale of a quarter of the floor space of the Fairhaven mills property to a rayon weaver has been discussed, the buyer not being disclosed, inasmuch as the sale is contingent on sanction of banks holding notes of the defunct corporation.

Robert W. Powers has resigned as president and treasurer of the Massasoit Manufacturing Company in Fall River on account of poor health, and George Mann has been elected president and David H. Atwater treasurer to succeed him. King Philip Mills have paid an initial liquidation dividend of $40, the mill being absorbed by Berkshire.

In Boston announcement has been made of a reduction in dividend of the Merrimack Manufacturing Company. A dividend has been announced payable May 31 to stock of record May 6 at the rate of 6 per cent, or 1½ per cent for the quarter. The previous rate was 12 per cent. per annum. Sales of the company in 1929 fell off 30 per cent with 57,433,883 yards sold out of 69,440,649 wards produced. The company is declared, however, in a good financial position.

The Kendall Company of Boston has declared a quarterly dividend of $1.50 and participating dividend of 37c on participating preferred, payable June 1 to stock of record May 10. The participating dividend a year ago was 25c.

In some Southern New England centers a program of wage adjustment is reported going forward.

Pequot Mills in Salem, Mass., division of Naumkeag Steam Cotton Company, have announced a labor extension plan worked out with the United Textile Workers increasing wages of employes and reducing production costs, and designed to give 2,000 operatives in the sheeting mill more continuous employment.

In Lowell more new employees were taken on by mills and factories during 1929 than in any other city of Massachusetts except Pittsfield, according to a recent announcement. The tax abatement case of the Ipswich Mills against the city of Lowell is to be aired shortly before J. Ronan, of Salem as commissioner.

The Newmarket Manufacturing Company of Newmarket, N. H., which has been on a four day week, is now running full time, according to announcement of Walter B. Gallant, agent. Administration and executive offices of the company are to be moved to Lowell, Mass., and consolidated with the offices of the Lowell Silk Mill, a unit of the company.

Looms recently purchased by Amoskeag from the Lancaster Manufacturing Company are arriving in Manchester, N. H., and are being set up in the Coolidge, Canal and No. 11 mills. The Amoskeag has been distributing $400,000 in bonuses to workers, payment being in the form of a bank book containing 5 per cent of hte wages paid the operative in 1929. The average bonus is reported to be $50.

New Textile Equipment and Publications

INCREASING LOOM PRODUCTION WITH DECREASING COST.

The Taylor Instrument Companies, Rochester, N. Y., recently published a very interesting little booklet entitled, "Increasing Loom Production with Decreasing Cost," in which they outline a way to increase production in a manner, they state that actually reduces cost. One interesting feature of this booklet is a chart giving the per cent decrease of warp loom stoppage obtained with the aid of the Tycos System in the slasher room of a few representative mills in the United States. The booklet may be obtained upon request to the company.

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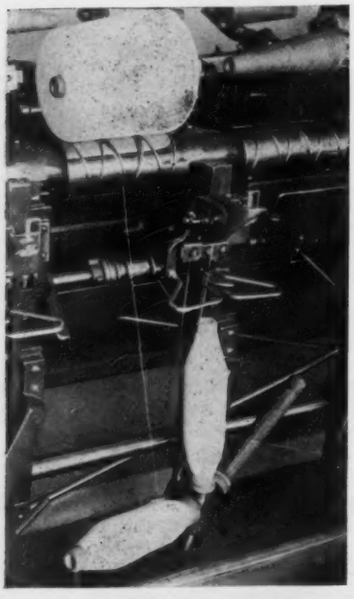
NEW ROTARY GUIDE WINDER.

Universal Winding Company, Boston, Mass., have announced the development of their No. 40 Rotary Guide Winder, which embodies some novel features, chief of which is the elimination of the cam arrangement and traversing guide used on the drum winder. A close-up view of a section of the No. 40 Rotary Guide Winder is shown in the accompanying illustration. As in the case of the usual winder arrangement, the drum in the new machine drives the package. At the same time, however, the company points out, this drum performs all of the functions of the reciprocating parts mentioned, which are eliminated on the new machine. The yarn follows the grooves in the drum and is delivered directly to the surface of the cone which is being wound. Thus, the company points out, the yarn does not cut into the drum, nor suffer impairment from contact with the distributing element.



Close-up of Rotary Guide Winder.

The company points out that the elimination of friction and vibrating parts permit operation at a higher speed, with lowered power consumption, as well as producing a simplicity of construction.

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AUTOMATIC SHEAR.

The Hermas Machine Company, Hawthorne, N. J., state they have developed, and are now marketing an automaitc shear, which is wholly mechanical, there being nothing of an electrical nature connected with it. The company states that it works equally well on light or heavy constructions. It is a simple device and is designed to occupy a minimum amount of space. Ball bearings are used on the one revolving shaft, and all parts rotate as a unit, there being no possibility of wear, which might call for frequent adjustments and no chance of its becoming jammed.

In large mills using a number of shears for the purpose of trimming the hanging strings from the selvages and body of the cloth, it requires an attendant to operate each shear. Although the shears show large savings over the old methods of trimming cloth, still greater savings can be made by making the shears automatic, so one operator can attend a whole battery of shears instead of having a man for each shear, it is pointed out by the company.

Another feature in connection with this device, we are told, is an automatic stop motion which stops the shear before the end of the piece leaves the cloth roll. This device, it is said, is extremely practical where more than one shear is used and the cloth is being fed from a roll, as it precludes any possibility of damage to the cloth should the operator not be present when the end leaves the cloth roll. Two or more rolls may be running out at about the same time, and all the operator has to do is to change the rolls on the first machine to stop, then proceed to change to rolls on the other machine or machines that have stopped in the meantime.

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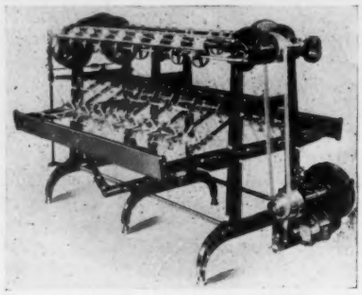
NEW STONINGTON WINDER.

The frame of the new Stonington winder, along with the cams, traverse levers, traverse lever feet and other parts are sturdily constructed, according to the Atwood Machine Company, Stonington, Conn. They also state that the use of a larger cam roll tends to give more even bobbins.

Other features claimed by the company for the new winder are: (1) The new traverse finger (patent pending),



The Stonington Winder.

which has oilless bearing and oilless traverse roll. (2) Oilless bearings being used throughout, which are important factors in reducing spoilage and maintaining continuous operation. (3) The upper crosshead, which is a unit assembly and is fastened to the end stand by two bolts. They state that assembly with perfect alignment is simple. (4) The new compact motor drive is also a unit assembly and is fastened to the end stand by three bolts. The motor is adjusted with an adjusting screw and a lock nut, so that the belt tension may be adjusted without shortening the belt.

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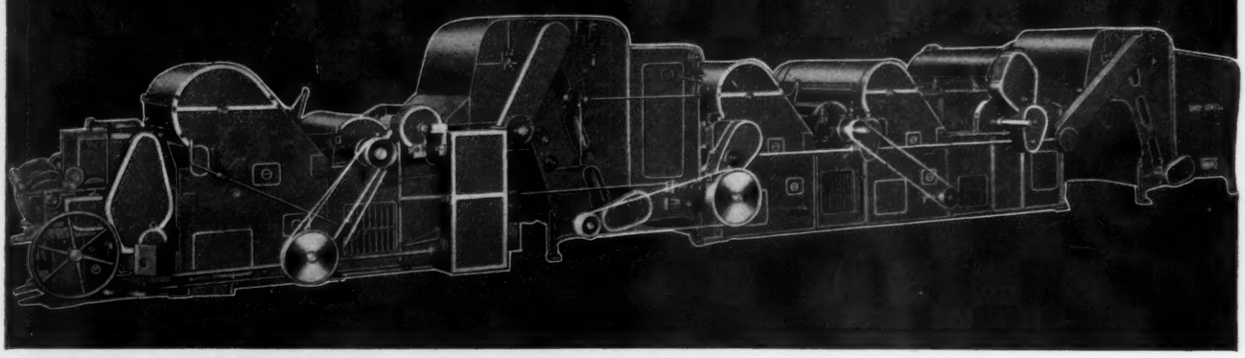
FELDLOCK "DUALFEED."

Wilcox & Gibbs Sewing Machine Company, 656 Broadway, New York City, have issued descriptive literature concerning the Feldlock "Dualfeed" machine, which they announce as a new departure in felling machines. They explain that the construction is along the same line as the Feldlock machine, incorporating the feed-off-the-arm principle, but in addition, the Dualfeed principle, a supplementary feeding mechanism for handling the upper layer of cloth while it is being sewn. The feature of this mechanism, it is pointed out, is that it provides for the two pieces of fabric in the process of sewing ending evenly at all times. The company states that the scope of the machine is large, ranging from heavy overall and corduroy fabrics to silk and rayon materials.

SACO-LOWELL ONE PROCESS PICKERS

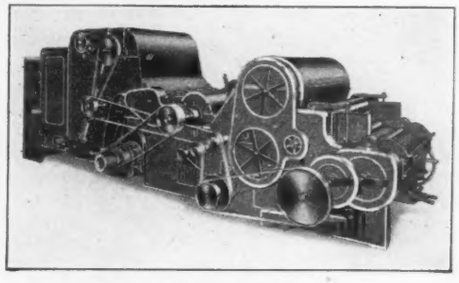


HANDS OFF!

Let Your Pickers Do ALL The Work—It's Cheaper and Better.

SACO-LOWELL'S One Process Picker with Synchronized Control makes picking and cleaning completely automatic. Leading mills are making substantial savings in operating costs by letting the machines do ALL the work. At the same time they are producing evener and better laps than is possible with 2 or 3-process work. For example, one of the large tire cord mills in Georgia, having operated several Saco-Lowell One Process Pickers for several months, discontinued the practice of weighing each lap. They weigh the first lap in the morning and the first in the afternoon. They know that the rest are perfect.

Here is a perfected process that demonstrates Saco-Lowell's leadership in its field. Facts and figures are available from a large number of installations. Savings can be definitely predicted once we know your situation and how much of your old preparatory machinery can be used. Let's have the facts now and we'll give you the figures.



NEW CALENDER DRIVE

SACO-LOWELL

MANUFACTURERS OF TEXTILE MACHINERY

147 MILK STREET, BOSTON, MASS.

CHARLOTTE, N. C. SPARTANBURG, S. C. ATLANTA, GA.

SHUTTLE CHANGING LOOMS.

The Stafford Company, Readville, Mass., recently published a very attractive booklet, entitled, "Principles and Advantages of Stafford Shuttle Changing Looms." In this booklet the company stated that although the introduction of rayon into the cotton weaving situation has raised innumerable problems for the weaving trade, its advent has meant a victory for them, as the difficult weaving situation presented by the use of rayon has simply accentuated the advantages of the Stafford shuttle changing principle. In the booklet different parts of the new loom are taken up and discussed in detail, aided by suitable illustrations, which afford the reader very comprehensive data concerning this new loom. Different patterns of cloth woven on the loom are also illustrated.

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BETTER WEAVING.

Better Weaving, is the title of a new booklet recently published by Graton & Knight Company, 356 Franklin Street, Worcester, Mass. In this pamphlet the company makes a very interesting comparison of five important points between the old and the new harness strap. They state that there is every reason for users of flat harness straps to discard the old slip-shod method of adjusting harness in favor of the modern , scientifically accurate method made possible by the improved harness buckle. They go ahead to point out that even a quick comparison will show why the accurate, permanent adjustment, which they say this buckle provides, insures better weaving and more cloth per hour of operation.

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NEW DRAPER HIGH SPEED WARPER.

The Draper Corporation, Hopedale, Mass., recently announced the placing on the market of a new high speed warper, which they state was designed and built to run at any rate of speed yarn and creel conditions will allow, and that at a very great speed there is very little vibration. The company says that it takes beams up to 28 inches in diameter, may be used with any modern creel designed for high-speed warping, and that it stops quickly and easily because its high power brakes match its brake speed. They also state that it has a beam doffer easily operated, regulated by screws with triple threads that save one-third of the time and labor of doffing, and that it has a sliding bar stop-motion of the loom type with patent device to open the warps where an end is down.

PARTS CATALOGUE READING MACHINE.

Textile Machine Works, Reading, Pa., have compiled and distributed a catalogue of parts of their full-fashioned knitting machines. The book not only shows every part of the machine, but gives all of the motions of the machine with descriptive articles as to their functions and contains as well sections devoted to various phases of full-fashioned manufacturing, such as a glossary of full-fashioned terms, illustrated, etc., etc. The company also recently distributed a comprehensive analysis of sleaziness in full-fashioned knitting, its causes and means of prevention.

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LOOKING AHEAD IN WOOD UTILITY.

The Grasselli Chemical Company, Cleveland, Ohio, recently announced that on account of the increasing use of the various lumber in cotton mills, textile mills, paper mills, and numerous other structures, they had found it advisable to issue a booklet, entitled, "Looking Ahead Twenty Years in Wood Utility." The booklet describes various methods of preserving wood, with special reference to zinc chloride.

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NEOMERPIN SA CONCENTRATED POWDER.

The Newport Chemical Works, Inc., Passaic, New Jersey, have published Bulletin NP-18, which is devoted to a discussion of the properties and uses of Neomerpin SA. Conc. powder. The company states that this product possesses excellent wetting out and dissolving properties together with powerful emulsifying capacities.

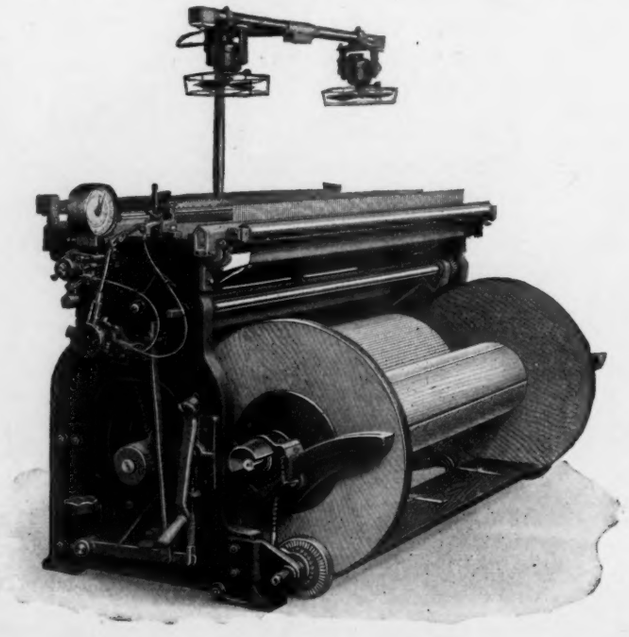
SMALL HYDRO EXTRACTOR.

The American Laundry Machinery Company, Cincinnati, Ohio, has just announced another addition to its line of textile extractors. This new 17-inch Monex extractor has a basket of all

American 17" Underdriven Extractor - Motor Driven

Monel-metal construction. The curb or case is also constructed of Monel metal, according to the company, which not only gives the machine a pleasing appearance, but is also an assurance that it will not be subject to the ravages of rust.

For the dyer of fine-gauge silk or rayon hosiery the extractor is said to be especially interesting because of its "silk-finished" basket, which eliminates any possibility of injuring the hosiery during the extracting operation. According to the manufacturers, the entire inside surface of the basket is



Right, the new Draper high speed warper.

WHERE THE G.T.M. HAS BEEN PRODUCTION COSTS ARE LOWER

Well known in industry are the economies of the G.T.M.—Goodyear Technical Man. He is a rubber expert who sits in on all jobs with a veteran's knowledge of manufacturing problems. He knows costs. He knows production. Whether it is movement of goods, air, liquids, or engine power, by skilful specification of Mechanical Rubber Goods he reduces expense and avoids loss. Swift, smooth, low-cost production is his goal. Many plants similar to yours enjoy new operating freedom from his work. See the G.T.M. to stop those costly leaks.

Your job is textiles. The G.T.M. is experienced and able in your field. He has brought the amazingly economical Goodyear Endless Compass (Cord) Belt to your high-speed drives—a nearly stretchless belt *with a core of rugged cord.* He has specified Goodyear Air, Welding, Water and Steam Hose for the efficiency of your plants. He has guarded your power with Goodyear Packing. The G.T.M. knows mills and the problems of textile manufacturing. He is your man, ready for your job.

For full information on savings the Goodyear Technical Man can bring to your business, write to Goodyear, Akron, Ohio, or Los Angeles, California.

THE GREATEST NAME IN RUBBER

GOODYEAR

HOSE BELTING MOLDED GOODS PACKING

tested before leaving the factory by inspectors who use fine-gauge silk stockings to test it.

Another unique feature pointed out by the manufacturers for the extractor is its substantial spindle bearing mechanism, which it is stated, needs filling with oil but once each year.

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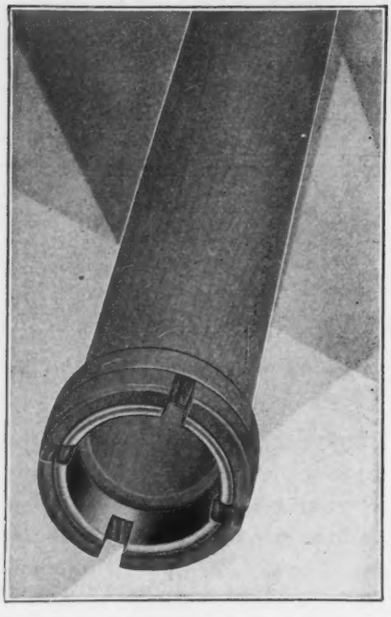
U S INSIDE BASE SHIELD.

That "there is nothing new" in the bobbin, spool, and shuttle industry is refuted in the recent announcement by the U S Bobbin & Shuttle Company of a new type of shield to give added protection to the base of U S card room bobbins. The new shield, the company points out, is of metal, well constructed, and designed to give a full measure of strength and protection to the inside base of U S card room bobbins. It is presented to the textile trade as the U S inside base shield, and as such protects the inside of the bobbin base from the usual chipping and scarring by gear collars. Moreover, the company says, it acts as a reinforcement to strengthen U S card room bobbins against cracking, and any other wear of handling or operating.



U S Inside Base Shield.

The company goes ahead to say, "Although primarily designed to give greater protection at the bobbin base for U S card room bobbins, thereby assuring them a longer operating life, the U S inside base shield gives an added and equally valuable service. Mill men are acquainted with the handling hazards of the old fashioned shields which so often cut and scratch the hands of operators. This condition cannot exist where U S card room bobbins fitted with the new inside base shield are being run, because the shield is designed to give protection where it is most needed and consequently, rarely comes into direct contact with the hands of employees."

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VEEDER-ROOT BRINGS OUT NEW PICK COUNTER.

Veeder-Root, Incorporated, manufacturers of counting machines for the textile trade, with factories at Hartford and Bristol, Conn., recently have developed the new Tanner type re-setting pick counter. The company states that the instrument has all the advantages of the standard Root type vertical drive pick counter (in fact, is interchangeable with it) plus the long-desired feature of making it possible to start each pay period with all counter readings at zero so that such readings actually show an accumulation of the production of each loom thus equipped from the start of the pay period only.

It will be seen that the subtraction, with the subsequent chance of mathematical error, of the pick counter reading at the beginning of the pay period from reading at the end of the pay period in order to determine individual loom production, has been entirely eliminated.

Provision is made on the counter, by means of an attached cardholder, for the posting on each loom of the expected production of that loom so that instant comparison between actual and expected production can be made by both weaver and overseer.

The company points out that the instrument is as tamper-proof as a counter can be, there being a Yale lock controlling the reset mechanism in such a way that resetting by the usual wing nuts permanently attached to the end of each dial shaft can only be effected by the person holding the Yale key which unlocks the dial shafts.

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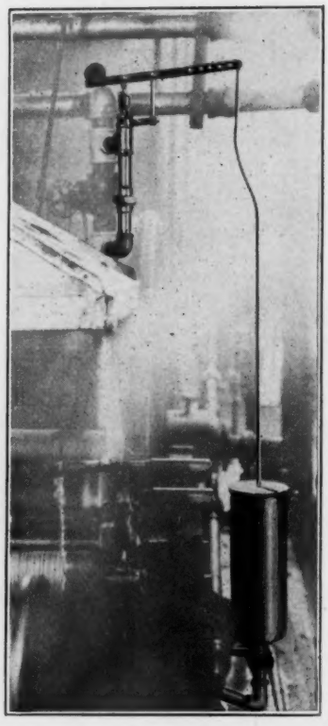
NEW HAND HOIST HOSIERY DYEING MACHINE.

Following their announcement of a little more than a year ago of a power hoist type rotary machine for dyeing hosiery, H. W. Butterworth and Sons Company, Philadelphia, have just announced a hand lift type of machine for dyeing hosiery in small lots.

Speaking of their new machine, the announcement states that this new machine is for the smaller dyeings, especially of the more delicate goods, to help with those colors which are otherwise found troublesome, and for redyeing goods which have been subject to a previous dyeing and stripping.



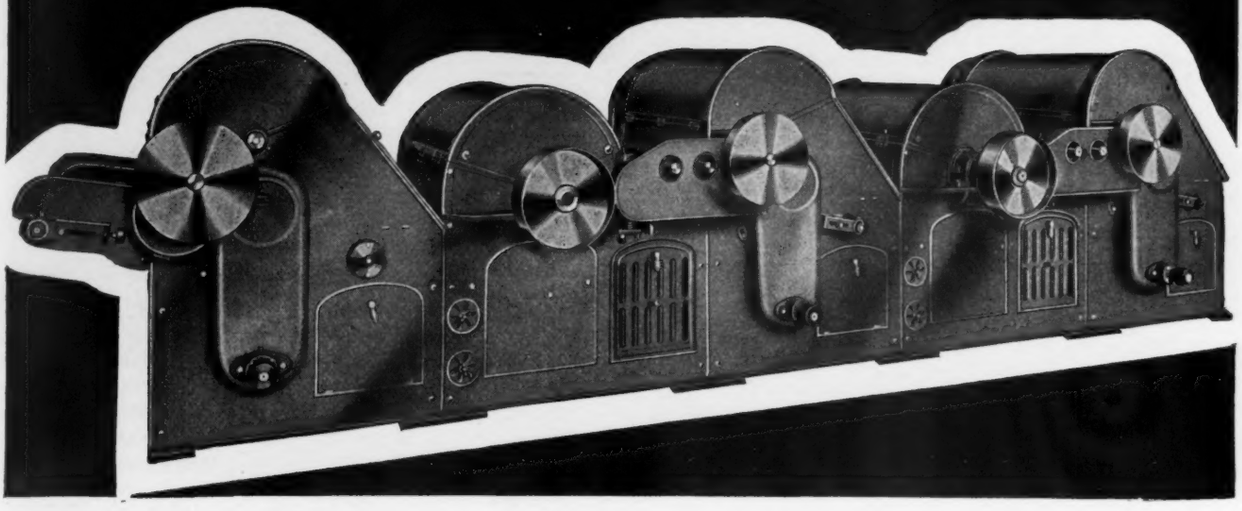
The above illustration shows the new Queen Size Control, for the maintaining of a level in the size box, recently introduced by the Ideal Machine Co., Bessemer City, N. C.

NEW HYGROLIT MERCERIZING SYSTEM.

With the new Hygrolit mercerizing system, Hygrolit, Inc., the manufacturers state, the roving on the slubbers is wound on perforated tubes, which are put over the common flyer bobbins, made from wood or hard pressed paper. The winding is then done in the usual way. The company points out that where heretofore the mercerizing of cotton yarns has been done by putting the threads in skeins, and subjecting those skeins to tension by hydraulic pressure, this new system eliminates the necessity of having to put the yarn in skein form, which of course is an unnecessary step for future manufacturing processes.

The perforated tubes full of roving material are then treated after special formulas in special apparatus and mercerized. It is stated that the solution in which the mercerizing is done causes a strong shrinking of the cotton fiber, and this shrinking is opposite to the parallel winding of the flyer bobbins, such doing away with and rendering unnecessary the strong tension which is needed in mercerizing all skeins. The tension appears automatically, as heretofore pointed out.

NEW
H&B TANDEM 30" CYLINDER OPENING AND CLEANING UNIT



OUR new 30-in. Buckley Cylinder Opening and Cleaning unit can be supplied in Single, Double, or Triple Units, suitable for connection to Hopper Bale Openers, Crighton Openers or Independent Feeders. All Cylinder Sections are of the Buckley type, with extended grid bar surface and large dirt-receiving chamber.

The Cylinders are built up on a central shaft, with boiler plate steel discs. Steel blades are riveted to the periphery of the discs, and bent at varying angles so that the cotton across the whole width of the machine comes under the action of the Cylinder.

Grid bars are of the narrow type, adjustable to the class of cotton being run. The spacing and arrangement of these bars provides the most effective cleaning area of any known cotton-cleaning agency. The Cage Sections are of the Lattice Delivery type, with single Cage and Lattice Apron, ensuring an even distribution of cotton the full width of the machine.

All Fans are of the multi-vane type, with steel blades, and mounted on Heavy S. K. F. Ball Bearings.

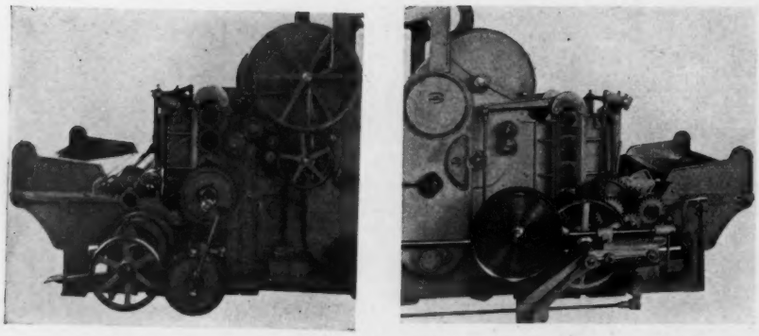
Safety Beater Locking Devices, Adjustable Air Shutters, and Stands for motor or countershaft drive are part of the regular equipment.

H & B AMERICAN MACHINE CO.

PAWTUCKET, R. I.

Southern Office: 814 and 816 Atlanta Trust Co. Bldg., Atlanta, Ga.

BUILDERS OF COTTON PREPARATORY AND SPINNING MACHINERY



Two views of the Ramsdell automatic self-doffing calender for pickers, announced recently by H. & B. American Machine Co., Pawtucket, R. I., and described on page 774 of the May issue. Without the use of human hands, this device automatically releases the brake, raises the lap racks, severs the sheet of lap, doffs the finished lap, places a new lap roll in the calender, carefully folds over the oncoming sheet of cotton, lowers the lap racks, and applies the brake; providing a continuous operation to the picker without stoppage for doffing.

BULLETINS ON CLOTH ROOM MACHINERY.

Curtis & Marble Machine Company, Worcester, Mass., have recently distributed Bulletin No. 294C, with reference to the Durrant Automatic Cloth Guiders, for feeding dryers, tenters, water mangles, mercerizing machines, etc., as well as doubling, winding, and rolling machines. The guider is shown in the accompanying illustration. The company points out that the guider is mechanically operated and is driven by the movement of the cloth, making a self-contained unit and requiring no compressed air, piping, valves, electricity, etc. The cloth passes vertically downward between the guider rollers, next around the carrier roll below and then up to the machine. The guiders are also available for horizontal action. Adjustment for different widths of fabric is made by a right and left-hand screw with a crank on the end.

The company also recently issued Bulletin No. 279-A, concerning the recently improved Type C Shearing Machine, which is also shown in the accompanying illustration, which presents the machine with three sets of cutting parts, two for the under side and one for the upper side of the goods; two brushes in front; and four cleaning rolls at the rear. Other equipment of this company described in this folder include the Type S Unrolling Frame and Scray, the No. 25 Railway Sewing Machine, and the Vertical Brushing Machine.

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CATALOGUE OF HEAVY CHEMICALS.

Rohm & Haas Company, 222 West Washington Square, Philadelphia, Pa., have issued a catalogue listing and describing the heavy chemicals manufactured by them, and their factories in Bristol and Philadelphia, Pa., for the process industries, covering a wide range of products in standard grades for the textile, leather, paper and other industries. The products are listed alphabetically, with general information concerning each, including the uses to which it is put.

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VENTURAFIN METHOD OF HEATING.

In a recent pamphlet, entitled, "Venturafin Method of Heating," The American Blower Corporation, Detroit, say, "Heating expense is a vital factor in the annual budget of a nation. Millions of dollars are spent every year for heating equipment, fuel, maintenance, repair, etc. Countless thousands of dollars are wasted each year through inadequate equipment and the improper application of equipment. The new, improved Venturafin method of heating will substantially reduce 'heating costs' wherever it is applicable and intelligently used."

The text of the pamphlet is devoted primarily to the performance of these new Venturafin units.

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NEW TYPE OF RAYON OIL.

National Oil Products Company, Harrison, N. J., announce the development of Textoyl No. 1556, a new oil product for oiling rayon to be knit or wound, for treating dyed rayon, etc. The company states that the oil is neutral, resistant to rancidity, and to oxidation, of low viscosity, with a low moisture content, and highly emulsifiable.

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TWO COLOR AND SOLUBLE TRANSFER.

By the use of our two color transfer, goods which heretofore could not be satisfactorily identified because of unsuitable combinations of color in the background can now be marked without difficulty, the Kaumagraph Company, 200 Varick Street, New York, points out. They say these two colors can either be combined in the transfer itself or it is possible to have a background color with a contrasting color for the lettering or pictorial design.

They say the soluble transfer is very useful in the hosiery trade where it is very frequently the case that certain shades of hose do not sell to advantage. When such a condition is discovered it is necessary to remove the transfer from the goods before redyeing. The company says that where heretofore this was done by means of a solvent, with the new Kaumagraph soluble transfer it is necessary only to place the hose in the stripping or dye bath and the transfer is removed completely.

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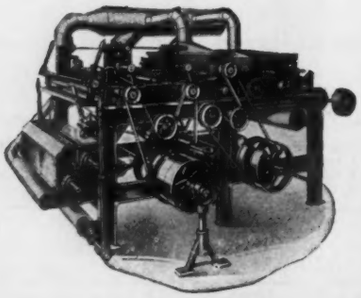
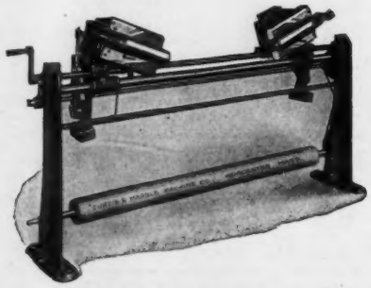
BOOK ON ENGLISH DECORATIVE TEXTILES.

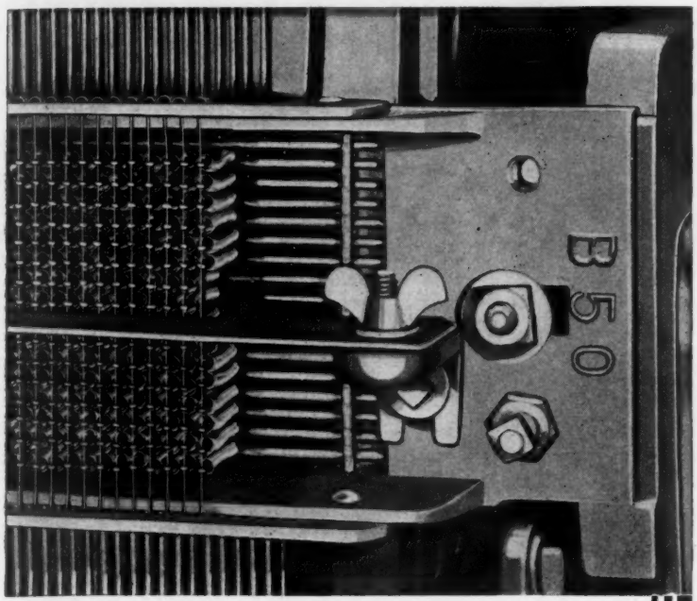
"English Decorative Textiles—Tapestry and Chintz," by W. Gordon Hunton, has been published by John Tiranti & Company, 13 Maple Street, London, England. The book represents an attempt to illustrate clearly the sequence and development of tapestry and chintz produced in England from the earliest time up to the end of the 19th century. The author collected about 200 rare pieces, and illustrations of these have been reproduced in collotype. A history of weaving and chintz printing supplements the plates.



Type C Shearer.



Durrant Guider.



In fine index construction . . . carefully placed racks prevent deflection of needles and needle pins. *Metal Double* Needle Plates, front plate of brass and back plate of steel, eliminate warping or shrinkage and support the needles when the front is removed for cleaning. » » » » »

Every part is constructed for uninterrupted performance . . . and simplified for speed in cleaning or adjusting. Simplified performance! Our new catalogue gives details. It's yours when you want it.

THOMAS HALTON'S SONS,
"C" AND CLEARFIELD, PHILADELPHIA.
SELLING AGENTS
H. A. FORBES, PATERSON, N. J.
THOMAS S. CAPPER, INC., CHARLOTTE, N. C.
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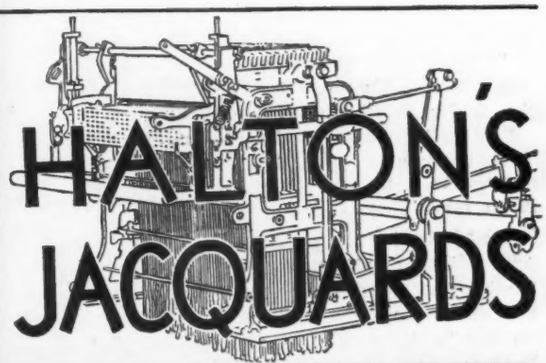

HALTON'S JACQUARDS

NEWS ITEMS *with a Textile Slant*

FACTORS TO CONSIDER IN WORKING OUT MERGERS.

Six major factors to be considered by the participants in any merger movement, and other questions which may or may not be important depending on the particular case, are analyzed in a 32-page booklet, issued by Ernst & Ernst, public accountants. The booklet is a reprint of a paper which was presented by A. D. Berning, a partner of the firm, at a recent convention of the American Management Association in Detroit.

"There are certain basic questions that apply to all business consolidations," the booklet says, "and the more important factors to consider in any merger movement are: (1) economic and legal soundness, (2) management, (3) financial position, (4) earning power, (5) formula or plan of merger, (6) launching the merged business."

Merger can hardly be justified, it is said, unless there is a sound expectancy that the combined concerns will be able to operate with greater benefit to the old owners and the public as well. The properties of manufacturing companies should be viewed from the standpoint of not only their reproductive and present sound values, but also their useful value to the new company. Location of plants is important. In view of labor conditions, labor costs, freight rates, exigencies of distribution and so on, a merger may necessitate radical rearrangements of manufacturing, whereby production of a particular class of products can be concentrated in one plant and production of a variety of products consolidated in another. Concerns that contemplate merging on the basis of producing somewhat similar lines of merchandise must give sufficient thought to differences in quality or prices, or sales outlets.

"As soon as a merger is finally agreed upon, the first thought should be 'budget.' The general operating plan in the minds of the organizers must be rounded out and interpreted on paper, it is said. "It must be set forth in the form of carefully prepared estimates and schedules, as a guide to accomplishment and a medium for coordination and control. The management of a newly merged busines must fix responsibilities, weld sales organizations, rearrange manufacturing, establish consistency of policy; will have too much to do to have its work further complicated by the lack of a well-ordered plan or budget of operations and expenditures."

The booklet goes into the various aspects of mergers in great detail, notwithstanding the short length of its subject matter.

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BOSSONG HOSIERY MILLS DENY RUMORS OF 42-GAUGE PRODUCTION.

Bossong Hosiery Mills, Incorporated, Ashboro, N. C., in view of indicated reports that they were manufacturing 42-gauge stockings, have announced that their production is exclusively 45-gauge stockings, marked and stamped as being genuine 45-gauge, and manufactured on 45-gauge Reading machines. Publication of this announcement is requested by the mill in order to correct any misapprehension occasioned by the reported rumors.

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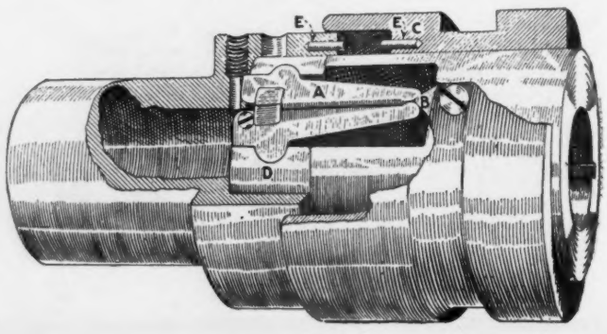
CLUTCHES FOR KNITTING MACHINE DRIVES.

Straightening needles "is the most important work in connection with the successful operation of a knititng machine," said C. H. Baxter in an article in the April issue. Carlyle Johnson Machine Company, Manchester, Conn., have pointed to this in a description of the Super-Johnson clutch, which they point out is of a design especially applicable to the light-powered drive found on knitting machines. The importance of the clutch on the knitting machine is emphasized as being a vital point in the successful operation of the machine, from the standpoint of controlling power transmission, etc. The description of this clutch, which is shown in the accompanying illustration, points out that the working parts of chrome nickel steel are enclosed in a compact cylindrical form which produces a simple clutch construction. These clutches have been used on various types of textile machinery for more than 25 years, the company points out.



Johnson Single Clutch.

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SWANN CHEMICAL COMPANY.

The Swann Chemical Company is the name of the new one million dollar company formed by the consolidation of Federal Phosphorous Company, along with six other manufacturers of textile oils and chemicals. Theodore Swann is president of the Swann Corporation.

Among the other companies included in the merger are: Southern Manganese Corporation, manufacturers of ferro phosphorus; Southern Manganese Land Company; Southern Manganese Mining Corporation; Federal Carbide Company and Jax Plant Food Company.

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PROCESS FOR DE-LUSTERING SILK HOSIERY.

American Aniline & Extract Company Incorporated, Venango and F. Streets, Philadelphia, Pa., have developed a process for the de-lustering of silk hosiery, which, it is explained, tends to reduce the effect of sleaziness materially and improve the appearance. The company explains that the process is carried out with two after treatments. After the hosiery is dyed, it is given a treatment of a 4 per cent solution of De-Lusterizing Salts No. 1, for five minutes cold, then extracted, but not rinsed, and entered in a 6 per cent solution of De-Lusterizing Salts No. 2, and run cold for 10 minutes. Then, if desired, the goods may be rinsed and, if necessary, a finish or softener may be used in this rinse. They state that a satisfactory method of delusterizing hosiery is with a standing bath of each solution, and, as these standing baths get lower, additions may be added in the same proportion as the original bath. It is essential to test both baths regularly before entering the hosiery.

THE TEXTILE INDUSTRY IS REORGANIZING

It is modernizing its manufacturing facilities. Keen competition and changing buying habits have dangerously narrowed the margin of profit. New machinery is being installed. And with this reorganization have come entirely new problems of lubrication—for the continued low operating costs, low power consumption and low maintenance which contribute so much to profits, depend on effective lubrication.

The relatively low expenditure for lubricants may easily be the key to the whole question of profit or loss.

The Texas Company has anticipated this development. It is constantly studying modern textile machinery and its lubrication, and has successfully developed new and improved methods and lubricants to meet new situations. The lubrication problems of the industry are Texaco problems. Ask to have a Texaco Lubrication Engineer join you in an examination of your plant. It *should* prove profitable. Write The Texas Company.

TEXACO

TEXACO LUBRICANTS

THE TEXAS COMPANY
135 East 42 Street, New York City

"THE NEEDLE'S EYE."

Union Special Machine Company, Chicago, Ill., manufacturers of industrial sewing machines, have begun the publication of a house organ for distribution among the "needle trades," entitled "The Needle's Eye." Its purpose is to disseminate information relative to new and improved methods of performing industrial sewing operations, and to familiarize manufacturers with the use of various machines. This publication is an outgrowth of the Union Special internal house organ "The Sales Bulletin," which was established in 1900 and has been published every month since.

The May number of "The Needle's Eye," featured sewing and seaming work on knitted fabrics. The editorial material included a description of new stocking styles, such as the "inside-out." and ultra-narrow seam French hosiery.

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HAZARD MOVES TO LARGER OFFICES.

Hazard Advertising Corporation, advertising council to many leading companies in the textile field, recently removed from 7 East 42nd Street, New York City to 295 Madison Avenue, corner 41st Street, where they have enlarged space and greater facilities to further increase the value of their service. C. H. Hazard is president. The concern had been located at their previous address for more than ten years, and from that point have served, among others in the textile field, the General Dyestuff Corporation, Lestershire Spool & Manufacturing Company, National Silk Dyeing Company, Scott & Williams, Incorporated, The Torrington Company, Incorporated, Willcox & Gibbs Sewing Machine and Ciba Company.

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J. I. BERNITZ EXPANDS.

J. I. Bernitz, agent in United States and Canada for Adolff bobbins will occupy the entire floor at 47 West Street, New York. His Canadian address has been changed to 11 Wellington St., East Toronto 2, Canada.

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NEW BRANCH OFFICE FOR DU PONT.

The Acele Division of the Du Pont Rayon Company announce that on Tuesday, May 6th, they opened a branch office at 40 Worth Street, New York City, in order to better handle the business arising from the increasing use of acetate yarns by the cotton industry. The new office will be in charge of Raymond T. Hoopes, formerly of Rockfish Mills. Miss Bernice G. Chambers, a stylist formerly of the Rayon Institute, will be an assistant to Mr. Hoopes. She will advise cutters up, stylists and buyers.

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H. M. McCORD CHANGES OFFICES.

The New York office of H. M. McCord is now located in the Pershing Square Building, Park Avenue and 42nd Street.

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DYEING ON RAINCOAT MATERIAL.

Color Card No. 711, of the Society of Chemical Industry in Basil exhibits current shades on raincoat material obtained in both Chlorantine fast dyes and Pyrogene and vat dyes. Chlorantine fast dyes have been taken into consideration first because of their most excellent fastness to light and good fastness to washing, it is stated. After treatment of the Pyrogene dyestuffs with bichrome, sulphate of copper and acetic acid has been avoided, with regard to probable after impregnation with rubber and vulcanization. For the same reason those shades included in the card are grouped in copper containing and copper free dyestuffs.

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RADIOGRAM FROM BYRD.

Charles A. Schieren Company, 30 Ferry Street, New York City, manufacturers of "Duxbak Belting," recently received, through the New York Times, a radiogram from the Byrd Antarctic Expedition, reading as follows: "The rawhide and sole leather products furnished the Expedition by your company proved a valuable contribution. The rawhide was most useful for constructing sleds and was standard equipment on the trail."

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LOCK SPOOL AND BOBBIN COMPANY INCORPORATED, FORMED.

J. E. Lock & Son have recently applied for a change in charter and permission to increase capital stock from $50,000 to $300,000, and to change the name of the company to The Lock Spool & Bobbin Co., Inc. The concern is located in Charlotte, N. C. It was started in November, 1928, to manufacture a complete line of spools and bobbins, both standard and under the Lock patent for textile mills. The products of the company consist of spools, speeder bobbins, skewers, twister bobbins, wood cones, etc. The company also controls patents for various devices used in the manufacture and repair of bobbins and spools, such as the dovetail, base protectors and drivers. Several manufacturers of spools and bobbins in other parts of the country are using these patents under license from the Lock concern. J. E. Lock, who is head of manufacturing and research, and chairman of the board of directors, was fourteen years connected with the U S Bobbin and Shuttle Company, and prior to that time served for thirteen years with the Wilsons firm in England. His son, Jack Lock, was formerly superintendent of the Greenville division of the U S Bobbin & Shuttle Co. Sales agents have been established by the corporation at Atlanta, Ga., and Fall River, Mass., with the company handling its own sales in the Carolinas.

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NEW EQUIPMENT AT CLEMSON.

A section of roving frames and spinning frames of the Clemson College, S. C. Textile Department has recently been equipped with Eclipse ball bearing bobbin holders. The school says that this ball bearing bobbin holder is a new method of holding the roving package in the creel and may be applied easily to any fly frame or spinning frame. They also state that the device is self-aligning and runs very freely, thereby making it possible to make a roving with as little twist as desired, and yet with no stretching or breaking back of the roving. It is also pointed out that a frame equipped with the Eclipse bobbin holder is much easier to clean and considerable time is saved when changing the roving.

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DUPONT'S WINDOW DISPLAY.

A boardwalk window display at the Du Pont Products Exhibit, recently held in Atlantic City, featured Du Pont fast dyes as used in modern bathroom sets of towels, wash cloths and mats. The newest patterns, including figured borders, striped effects, all-over and reversible designs, were shown. Groups of these articles in various hues and designs, neatly tied with ribbon, were displayed in background cabinets of black, decorated with red and yellow, on either side of the window.

The ensembles shown were manufactured by the Cannon Mills, Inc., New York City, and included the new pastel shades of jade, peach, rose, orchid, turquoise and maize.

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GENERAL CHEMICAL OPENS WAREHOUSE AT CHARLOTTE.

The General Chemical Company recently announced the opening of a warehouse at 201 West First Street, Charlotte, N. C., with James J. Peyton as resident salesman in charge.

MEET THE MOREHEAD ENGINEER . . . .

. . . he has improved steam drainage and boiler feeding conditions in many plants like YOURS . . .

In every branch of industry, for 37 years, the Morehead Engineer has been helping to increase the efficiency of plant operation, through improving steam drainage and boiler feeding. His knowledge and engineering skill are at your command. Let him assist YOU . . . and tell you the many advantages of the Morehead Back-to-Boiler System.

Your own experience will enable you to appreciate the value of these eight vitally important services performed by the Morehead Back-to-Boiler System:

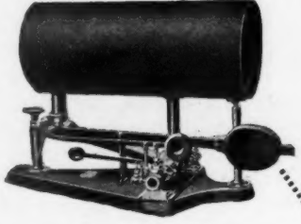
1. **Drains all kinds of steam-heated apparatus . . . *immediately* and *thoroughly*.**
2. **Enables steam-heated apparatus to work at full capacity, thus *increasing production* and *improving quality* of product.**
3. **Handles water of condensation at any temperature—212° and above—the higher the better — without atmospheric vent.**
4. **Automatically *returns* all condensation to boilers at *original high temperature* . . . thus saving valuable heat units in excess of 212° F.**
5. **Supplies the boiler with pure, hot, distilled feed water which deposits no scale, and, in addition, acts as a most efficient boiler compound in purging the boiler of accumulated scale and dirt.**
6. **Uses only ten per cent of the steam that is required by a pump doing the same work.**
7. **Eliminates need for a lifting pump, taking the place of such a pump and operating as simply as the law of gravity.**
8. **Definitely insures *fuel savings* and *lower operating costs*.**

MOREHEAD MANUFACTURING CO.
Department C DETROIT, MICHIGAN

Working Better All the Time

Proof that the Morehead Engineer performs a real service: "Recently, when a plumber started to replace damaged parts in the tank of our Morehead Back-to-Boiler System, he found that the parts were not damaged at all. Only the packing needed to be replaced. Our Morehead System is working better all the time."

Parisian Cleaners, Junction City, Kansas.



Morehead Back-to-Boiler SYSTEM

(443)
MOREHEAD MFG. CO.,
Dept. C
Detroit, Mich.

I'd like to have your interesting 44-page booklet, giving helpful information regarding the Morehead Back-to-Boiler System. This will, of course, place me under no obligation.

Name _____
Company _____
Address _____
City _____ State _____

NOTES ABOUT MEN YOU KNOW OR KNOW ABOUT

Johnston McCorkle has become superintendent of the Scottdale Mills, Scottdale, Ga., succeeding C. E. Wisner, who has retired from this position following more than 20 years service in this capacity. Mr. McCorkle for the past several years has been associated with the Fulton Bag and Cotton Mills, in Atlanta, following his graduation from the Georgia School of Technology, in the textile department.

George S. Harris, who recently resigned as president and manager of the Exposition Cotton Mills, Atlanta, Ga., has become president of the Hunter Securities Corporation, which is a subsidiary of the Hunter Manufacturing and Commission Company. It is understood that Mr. Harris will continue to make his headquarters and residence in Atlanta, and that he will be directly associated with the Hunter Manufacturing and Commission Company as consultant in connection with certain of its mills.

E. A. Hall has become superintendent of the Social Circle Cotton Mills, Social Circle, Ga., succeeding J. J. Hyder, who recently resigned.

Carl French has been appointed manager for the Eastern division of the U S Bobbin & Shuttle Company. He is well acquainted with the problems of textile men from long experience in the textile industry itself.

Carl French.

E. A. Clark, sales engineer of the Philadelphia office of the Reliance Electric & Engineering Co., has been advanced to the engineering department in Cleveland where he will be engaged in the design of direct current motors.

Frank J. Dutcher, chairman of the board of directors of the Draper Corporation, Hopedale, Mass., died at his Hopedale home on April 13th. Mr. Dutcher, one of the pioneer figures in the textile manufacturing and textile machinery industries of this country, was 80 years of age at the time of his death, and up until a few weeks prior to his death, had regularly attended to his business duties.

E. W. Hammond, of Greenville, S. C., has been appointed by Wickwire Spencer Steel Co., manufacturers of straight wire card clothing, southern representative.

Frank Love, recently accepted a position with the Keystone Finishing Mills, Burlington, N. C., and will be in charge of dyeing. Mr. Love, who was formerly with the Neisler Mills, Kings Mountain, is a graduate of the Textile School of North Carolina State College.

Warren H. Pearman, formerly overseer of twisting at the Aldora Mills, Barnesville, Ga., has become associated with the Goodyear Clearwater Mills No. 3 at Atco, Ga.

F. Lee Putney, who was a prominent manufacturer of Frankford, Philadelphia, died at his home April 12th after a brief illness caused by pneumonia. Mr. Putney became connected with the Philadelphia Felt Company in 1913 and at the time of his death he was sole owner.

Ralph R. Newquist has been appointed sales engineer of the Chicago office of the Reliance Electric & Engineering Co., Cleveland, manufacturers of alternating and direct current motors.

Paul G. Gillespie has accepted a position with the Fairforest Finishing Plant, Fairforest, S. C. For the past three years Mr. Gillespie has been engaged in spinning research as conducted by the U. S. Department of Agriculture in co-operation with the Textile Department at Clemson College.

D. M. Bailey, who has been with the Riverside and Dan River Mills, Danville, Va., is now in charge of dyeing at the Durham Cotton Manufacturing Company, Durham, N. C. Mr. Bailey is a graduate of the Textile School of North Carolina State College.

W. T. Morton, who until recently was head of spinning at the Middleburg Mills, Batesburg, S. C., has accepted a similar position with the Aragon-Baldwin Cotton Mills, Rock Hill, S. C.

Robert O. Ware has resigned as overseer of carding and spinning at Alabama Mills Company, Aliceville, Ala.

W. E. McKinney, until a short time ago overseer of spinning at the Peerless Mills, Thomaston, Ga., now has a similar position with the Elberton Cotton Mills, Elberton, Ga.

B. F. Moffatt was recently made personnel manager of the Rock Hill Printing & Finishing Co., Rock Hill, S. C.

Harry Schmidt has resigned his position as superintendent of the Greensboro Full Fashioned Hosiery Mills, Greensboro, N. C., and accepted a position in Reading, Pa.

Gordon R. Hope, of the American Bemberg Corporation, was recently given charge of the southern territory and is making headquarters at Greensboro. He has been with the merchandising department of the company for some time.

J. A. Fairbrother, southern representative of the Atwood Machine Company, of Stonington, Conn., recently opened an office in Charlotte, N. C.

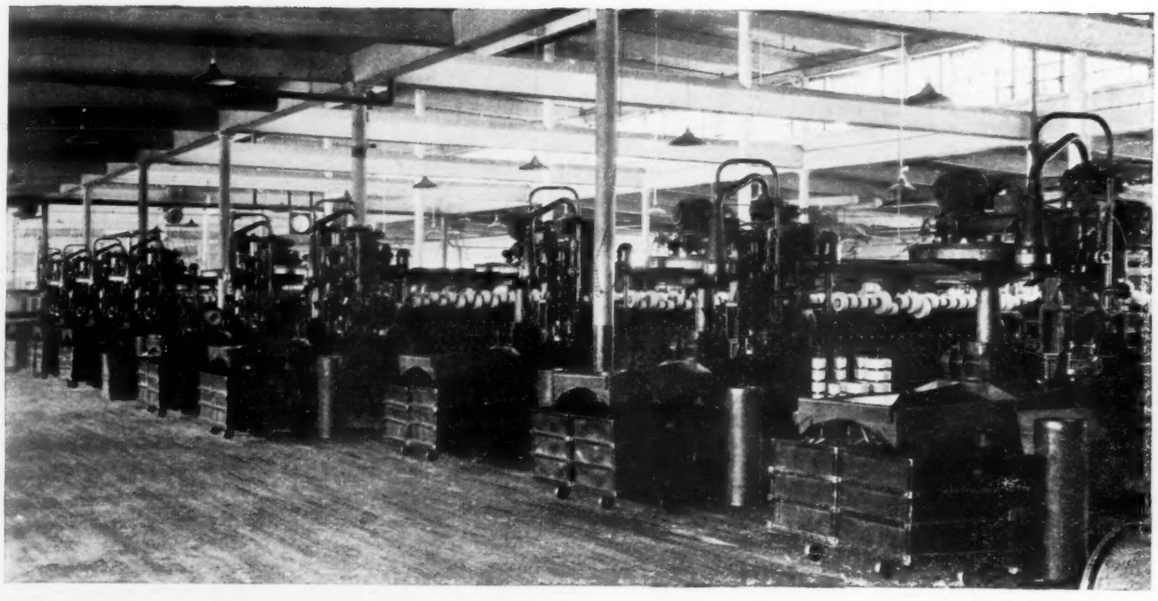
A. A. Hurley recently resigned his position as overseer of weaving at the Baldwin plant of the Aragon-Baldwin Mills, Chester, S. C., and has accepted a similar position at the Social Circle Mills, Social Circle, Ga.

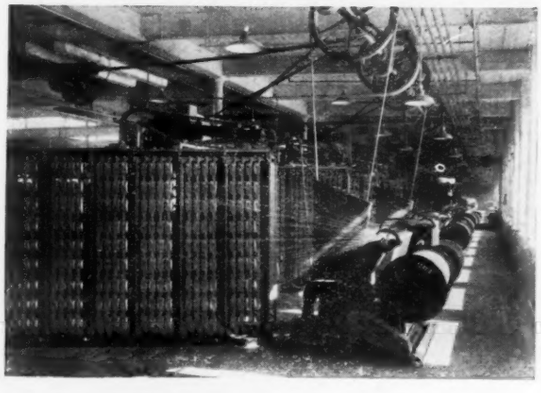
Nelson N. Harte, a graduate of the Textile School of North Carolina State College, has accepted a position with the Burlington Silk Mills, Burlington, N. C., in the designing department. Mr. Harte for several years has been with the Ranlo Mills in charge of the testing laboratory.

J. B. Gillham and **G. A. Anderson,** of the Reliance Electric & Engineering Co., Cleveland, Ohio, have been sent to the Los Angeles and San Francisco offices respectively of the Utilities Equipment Corporation where they will handle the sales of Reliance alternating current and direct current motors.

J. B. Knight, Sr., has been promoted from overseer of carding and spinning to the position of superintendent at the Enterprise Cotton Mill, Enterprise, Ala.

"EVERY KNOT A WEAVER'S KNOT"





FISK

of NEW BEDFORD, MASS.

New England Mill is a Satisfied User

NINE Barber-Colman Automatic Spoolers and nine High Speed Warpers are to be found in the spooling and warping room of this prominent New England cord fabric mill. These machines are used by Fisk in order to obtain better tire cord with lower spooling and warping costs. Barber-Colman machines wind the tire yarn at high speed and low tension, producing the desired results. "Fisk of New Bedford" is added to our list of Satisfied Users.

ILLUSTRATIONS: TOP, the battery of nine Automatic Spoolers; MIDDLE, looking down the warper aisle; BOTTOM, the mill of the Fisk Rubber Company at New Bedford, Mass.

BARBER-COLMAN COMPANY

General Offices and Plant

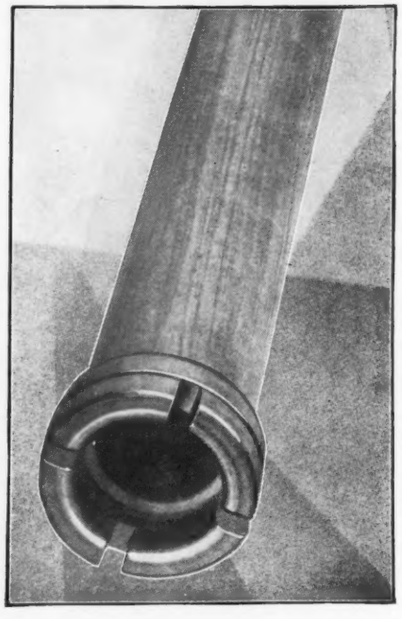
ROCKFORD, ILLINOIS

GREENVILLE, S. C. FRAMINGHAM, MASS

FINISH GUARANTEED

U S HARDWEAR *Finish gives new durability to U S products*

THE *U S HardWear Finish* gives a new standard of durability to U S Quality Products. The new finish, ... for U S Products, impregnates the wood fibres and binds them firmly together. It insures a uniformly tough, durable surface that will not mar readily, and thus lengthens the life of U S Products under operating mill conditions.



Number **51** *Fifty-one*

Specified for U S Card Room Bobbins

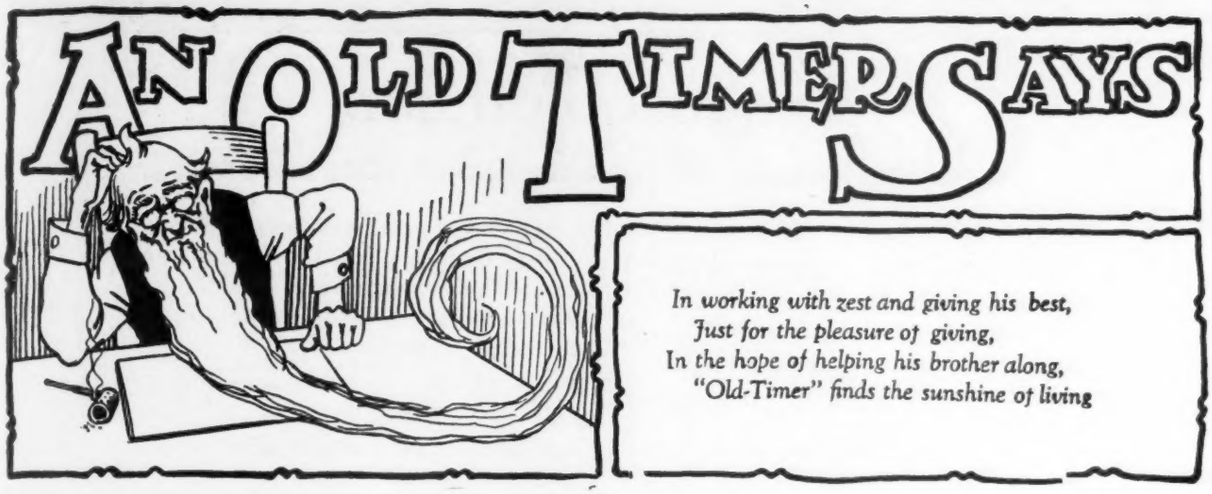
U S HardWear Finish No. 51, *applied specifically to U S Card Room Bobbins,* gives a smooth, wear-resistant surface, and the finish of the hole definitely minimizes the collection of lint under operating conditions. It insures service-satisfaction of U S Card Room Bobbins under any temperature up to 100° Fahrenheit and 100% relative humidity.

Founded in 1857

U S BOBBIN & SHUTTLE COMPANY

MANCHESTER, N.H. *EASTERN DIVISION*
MANCHESTER, N.H. ~ GOFFSTOWN, N.H.
LAWRENCE, MASS.
WILLOUGHBY, VT. ~ PHILADELPHIA, PA.

MONTICELLO, GA. *JORDAN DIVISION*
GREENVILLE, S. C.
MONTICELLO, GA. DUBLIN, GA.
JOHNSON CITY, TENN.


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living

Here's a Question for You!

Do you ever ask yourself the kind of questions you would ask a man who would be applying to you for the position you hold—providing you were the man who is your employer?

Now don't just read that question like you would read some casual announcement in your newspaper—but study it, answer it honestly to yourself.

Do you? No, not very many men do.

Then, what OLD-TIMER is trying to do is to get you to think about *yourself* like you would any other thing which is for sale.

What! You don't consider yourself for sale!

Well, what are you, then?

Certainly you (your services) are for sale to the highest bidder just like a commodity of any kind.

You would accept another position for a substantial increase in salary, would you not? Then you are for sale to the highest bidder.

And if you are for sale, what are you doing to make *yourself* worth more money? What are you doing to cause executives who are looking for more efficient men, to be attracted to you?

What are you doing with your job that is better than the average man, who holds the same position, is doing?

That requires *thinking*, brother, and OLD-TIMER is here to tell you that the man who can make his "thinker" get out of the ordinary rut is the man the money is looking for in these days of high competition.

"Ideas" are the result of concentrated study and research. Research usually results in finding out something you did *not* know about; something you felt sure you knew *all* about.

Gosh! I'm getting all mixed up I guess, but after reading that paragraph over—I can't make it any plainer—

Them's my sentiments.

And "them sentiments" are based on a life-long study of men and human nature. And the more I try to find the answer to the perplexing question as to why men do not study *themselves* more, the further I seem to get from the answer.

I once made the remark to a textile graduate I was trying to teach something about running a cotton mill, that human nature is one of the most complicated studies we have, and yet the most simple.

He replied that the remark was contradictory, that is, it was the same as saying yes and no at the same time.

Well, it was contradictory to him, because he could not catch my meaning, and I kept pegging at him for about three years before he began to see the light, so to speak.

I finally took this young man off of a section in the weave room and made him overseer of carding in a very large mill. Now you old overseers and superintendents can imagine the job I had before me to put a young upstart of a textile graduate over section men, some of whom had been on the job since the mill was built and old enough to be his daddy.

No, they did not all quit. Neither did he have to discharge any of them for disloyalty. But, I am getting away from the thought I wished to bring out—that strange animal, human nature. And brother, I want you to realize that *you* are one of them, because you will not apply to *yourself* the things you know you should.

This same young chap said a thing to me one day after we had been putting the gauges on the cards which the grinders had set up. We did not allow any card to be started up until we put the gauges on it, and that also gave us a chance to talk to the grinders, so what he said to me was prompted by the conversation we had just had with this grinder. I was still pumping that human nature thought at him and trying to prove it to him by showing him a young fellow could take charge of a room under the handicap he was laboring under and make a go of it, providing he knew human nature. As we walked back to the office he looked at me with rather a perplexed expression on his face and said: "Yes, I see how you do it, and I don't see it."

Well, anyway fellows, he made good. He ran that room successfully.

What's that? Did I hear you say "Bull". The idea

(Continued on page 965.)

Resourcefulness

and the World of Undeveloped Resources

IN the business world of undeveloped resources, man's own *Resourcefulness* is the most alluring and the most desirable of development.

Resourcefulness is that mental capacity which sees clearly how to do the seemingly impossible—and does it.

Modern Business demands it. Progress requires it. Notable success is pure luck without it. It discards old standards of accomplishment; exacts a double yield from the soil; opens the skies to traffic, and turns manual labor over to machines. It urges men to use their brains. Its presence commands the highest premium.

Modern Accountancy inspires and develops Resourcefulness in men. With its enlightened application of facts and figures, its Budget, its System, Method and Order, it *makes men see* the possibilities which lie in their world of undeveloped resources.

ERNST & ERNST

ACCOUNTANTS AND AUDITORS—SYSTEM SERVICE

AKRON	CHICAGO	DENVER	HUNTINGTON, W. VA.	MEMPHIS	PHILADELPHIA	ST. LOUIS	TULSA
ATLANTA	CINCINNATI	DETROIT	INDIANAPOLIS	MIAMI	PITTSBURGH	ST. PAUL	WACO
BALTIMORE	CLEVELAND	ERIE	JACKSON, MISS.	MILWAUKEE	PORTLAND, ME.	SAN ANTONIO	WASHINGTON
BIRMINGHAM	COLUMBUS	FORT WAYNE	KALAMAZOO	MINNEAPOLIS	PROVIDENCE	SAN FRANCISCO	WHEELING
BOSTON	DALLAS	FORT WORTH	KANSAS CITY	NEW ORLEANS	READING	SEATTLE	WILMINGTON, DEL.
BUFFALO	DAVENPORT	GRAND RAPIDS	LOS ANGELES	NEW YORK	RICHMOND	TAMPA	WINSTON-SALEM
CANTON	DAYTON	HOUSTON	LOUISVILLE	OMAHA	ROCHESTER	TOLEDO	YOUNGSTOWN

CLOTHS

ROLLER

CLEARER

SLASHER

Year after year Philadelphia Felts have been winning friends through quality, uniformity, and the ability to perform right. They will continue to do so, because they are manufactured on the firm principle of serving the industry better—always.
Tomorrow, as today, Philadelphia Felts will give uniform results—the Roller Cloth will produce the best cotton yarn because its cushion and even surface are designed for the purpose . . . the Clearer Cloth, with its strong non-shedding nap will completely remove all short fibre from the rolls . . . the Slasher Cloth, with sufficient cushion and porosity will continue to thoroughly force sizing into the yarn.

Specializing in Stamping Blankets.

Our Southern Sales Manager, Mr. Clarence B. Seal, is an expert service man and will be pleased to assist you on your felt problems. Address inquiries to Philadelphia.

PHILADELPHIA FELT COMPANY

FRANKFORD, PHILADELPHIA, PENNA.

HOW OTHER MEN MANAGE

Practical Discussions by Cotton's Readers On all varieties of Mill Subjects

A Question on Denims.

What causes shade to appear and disappear suddenly? Readers with this experience on denims are invited to report their findings.

EDITOR COTTON:

Here is a question I should like to have discussed in your "HOW OTHER MEN MANAGE" department.

What will cause the shade to appear suddenly in 2.30 denim filling in several cuts for a few days, then disappear as suddenly as it showed up? This is not always on the change of a quill in the shuttle, nor the length that a quill will weave across the cut. It very often looks as if the off shade and correct shade were on the same quill, and it is also very hard to determine where the shade goes out. It will show up very plainly from six to twelve inches across the cut, then gradually fade out into the proper shade.

Any information your readers can offer in the way of suggesting the causes of this will be appreciated.

CONTRIBUTOR NO. 4761.

More on Slashing and Weaving Broadcloths.

A detailed reply, which is very interesting, to some questions on this subject that appeared in January.

EDITOR COTTON:

In your January number you published some questions from "G. W. (GA.)" with reference to weaving cotton broadcloths. This man is making constructions from 96x64 to 104x72, with 30s warp and 36s to 40s filling.

This man asked five different questions: He wanted to know (1) whether it was practical to run these goods on 4 harness, with two working together; (2) how the warp should be drawn in on the harness; (3) what is meant by staggered cams; (4) what is the percentage of contraction on broadcloths; and (5) what would be a good size formula to use.

Since I have had an extended experience in the manufacture of three different constructions of this fabric, perhaps my remarks will prove of some use to him.

In addition to answering the question, I should like to take the liberty of commenting upon another reply to this question which you have already published from "CONTRIBUTOR NO. 4680," in the March issue. I shall comment upon his letter, not to make light of his reply, or to criticize destructively, but to clear up some points in some statements he has made.

First, answering "G. W.'s" questions. By all means weave a broadcloth, or any other relatively high sley plain woven fabric, with four shades. We even use six shades in weaving one construction of broadcloth;

We invite our readers to make use of this department for the discussion of any and all problems arising in the mill or the finishing plant. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. The editors do not hold themselves responsible for any statements of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

though in the inquirer's case four shades are sufficient for the 96x64 and the 104x72 constructions. With four shades the warp is better distributed in the harness and a great deal of chafing is eliminated, when forming the shed, resulting in a much better weaving fabric than if the same warp were drawn in two shades.

Before proceeding further in answer to the inquiry, let me quote here from the letter of "CONTRIBUTOR NO. 4680," published in your March issue, concerning staggered cams. This man wrote as follows:

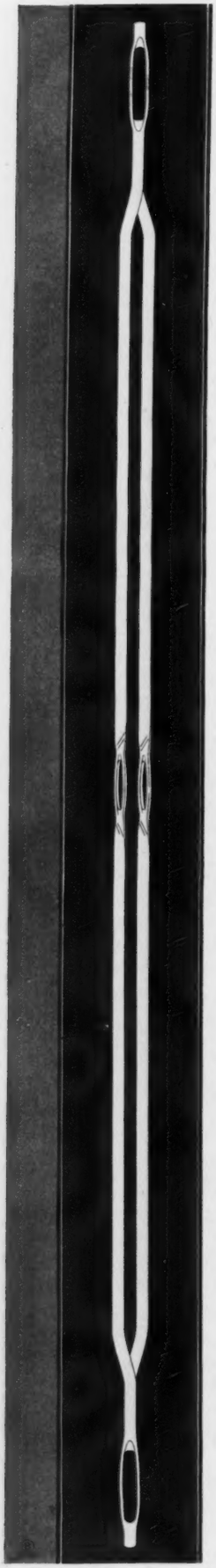
"Staggered cams are built by the loom manufacturers for use where four shades are used. Staggered cams are a great improvement over the regular cams in running four shades with two shades fastened together and working as one. There are four cams—one for each harness, but two of them go up together and two go down together. The cams are built so that cam 2 follows a little behind cam 1, as they go down, and the yarn is a fraction of an inch further from the race plate when both cams are all the way down. This, you will see, gives less crowding of the yarn."

Answering now "G. W.'s" inquiry as to how to draw in a broadcloth, when using four shades, the warp is drawn in:

1 Back shade
2
3
4 Front Shade

I am sending herewith some drawings, Fig. 1 and Fig. 2, which I shall refer to in this discussion. The draft just given shows that the first and third ends are drawn in the two back shades and that the second and fourth ends are drawn in the two front shades. Thus, since the first and third ends weave alike, and the second and fourth ends also weave alike, the first and second shades work together from one cam and the third and fourth shades work together from a second cam. The two back shades are connected to one strap and jack, the two front shades are connected to a second strap and jack.

Now referring to Fig. 2 herewith, it will be noted that the first and second shades are actuated by the cam 1 and 2, and the third and fourth shades or actuated by the cam 3 and 4. The third and fourth shades



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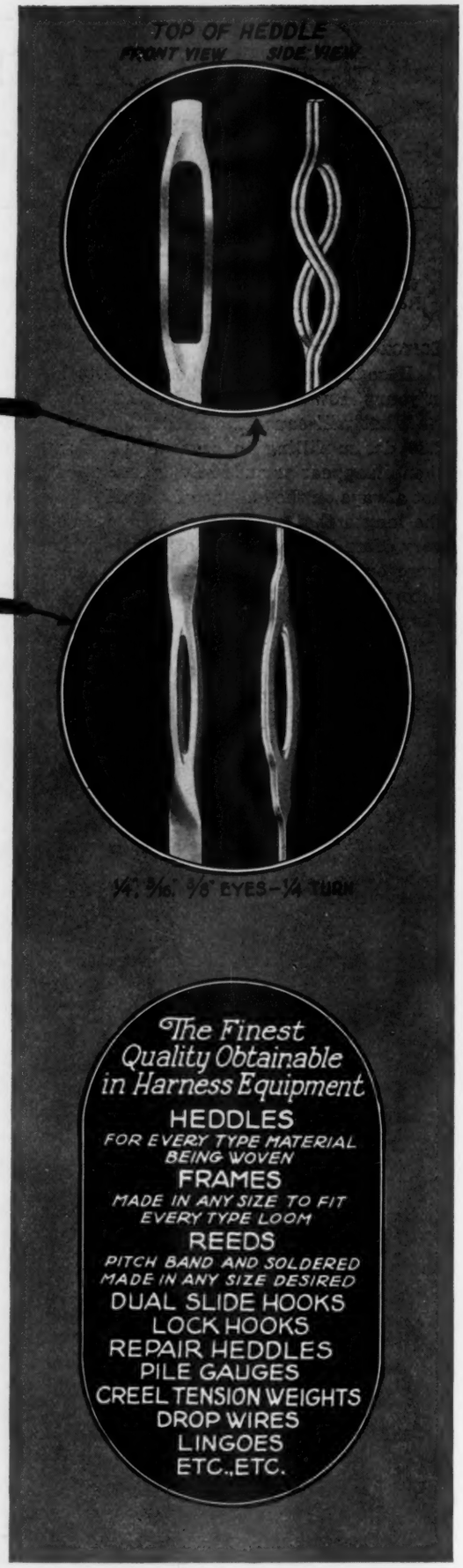

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are shown in their position with their respective heddle eyes at the same level. The fourth warp end is parallel to the race plate on the lay *B* while the second warp end, meeting the other three ends at the fell of the cloth *C*, "is a fraction of an inch further from the race plate"—to apply a remark which "CONTRIBUTOR No. 4680" used in his reply in the March number.

In case the inquirer should ever have an occasion to use six shades on a broadcloth, or other plain weave, the warp would be drawn in:

1 Back shade
2
3
4
5
6 Front shade

This draft shows that all of the odd numbered ends are drawn in the three back shades, these three shades working together, while all of the even numbered ends are drawn in the three front shades, these three shades working together also.

The third question asked by "G. W." was for an explanation of staggered cams. I suppose "G. W." has in mind a straight draft on four shades:

1 Back shade
2
3
4 Front shade

If this draft were used to weave a broadcloth (plain weave), then the first and third shades would surely have to work together, likewise the second and fourth shades.

This draft would also call for four cams set in staggered fashion, so-called, on the cam shaft, and, of course, four treadles and four strap and jack connections. It should be easily seen that, although it would be possible to weave the broadcloth in this manner, this arrangement is very impractical with needless expense attached. In addition, some features of this tie-up would prove detrimental to the good weaving of the fabric.

In this connection, I now refer you to Fig. 1. Referring to the sketch, *A* in Fig. 1 shows the cam setting advocated by "CONTRIBUTOR No. 4680," with the drawing-in draft just below. In Fig. 1 *B*, I show my setting of four similar cams, arranged for a straight draft on four shades. "Contributor No. 4680" states that: "Cam 2 follows a little behind Cam 1," etc. This is exactly what would take place with the cam arrangement shown at *B* in Fig. 1, except that it is Cam 3, instead of Cam 2, that follows a little behind Cam 1, since Cams 3 and 1 actuate shades 3 and 1, which work together.

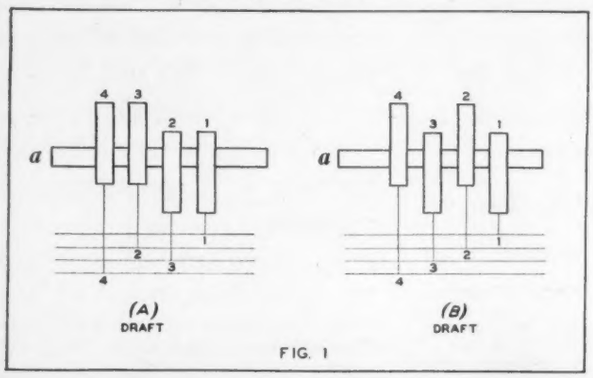


FIG. 1

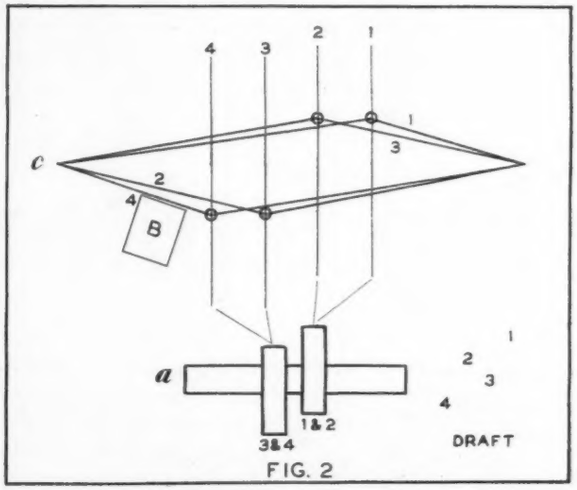


FIG. 2

From this explanation, I believe it will be evident that both "CONTRIBUTOR No. 4680" and I are right, and I might say that based upon my own experience, I have never found it an advantage to weave plain goods with four cams set as in Fig. 1 *A*, over the arrangement shown in Fig. 2, which I have found to be much more preferable.

While on the subject of staggered cams, I would like to call attention to parts of the reply of "CONTRIBUTOR No. 4680" in the March number, as follows:

"Staggered cams are a great improvement over the regular cams running four shades with *two shades fastened together and working as one.*" Further on he said, "The cams are built so that *Cam 2 follows a little behind Cam 1, as they go down.*"

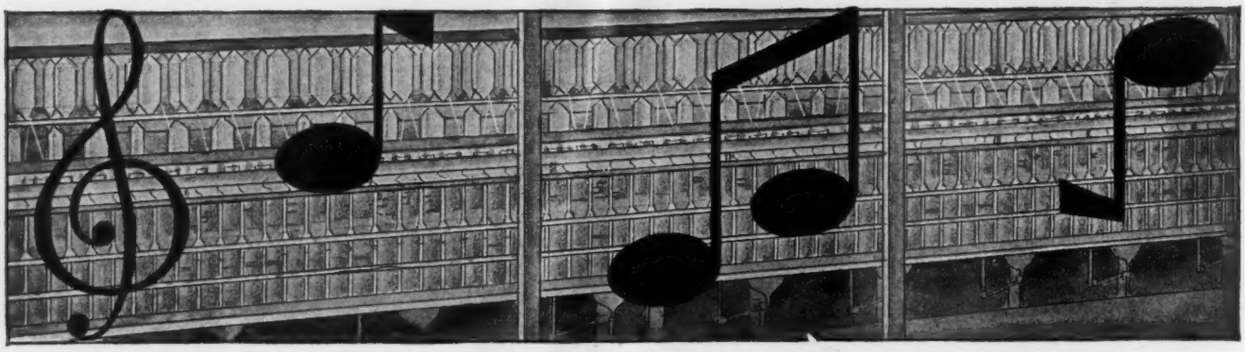
I have put in italics the part to which I am referring. Cams 1 and 2 are essentially the same, yet Cam 2 follows behind Cam 1 as it goes down. If the two shades are fastened together, as advised by "CONTRIBUTOR No. 4680," the two different forces are acting on the one object at the same time. The reason that I bring this point up is that I have actually seen the shades fastened together in this manner when using four staggered cams, the work running badly and the overseer of weaving, and others, not knowing what was causing the trouble. If the shades were not fastened together very rigidly, the trouble was lessened, but where the two shades were *fast* real trouble ensued. Whenever the cam arrangement shown in Fig. 1 *A* is to be used, I advise separate straps and a roller overhead.

Your inquirer wanted to know next the contraction in broadcloth. Broadcloth, like other fabrics, contracts warp and filling ways. No definite or working average percentage of contraction for broadcloth can be stated. It is all largely a matter of experience with the "local" conditions in the mill where the fabric is woven.

In the case of warp contraction, this is governed largely by the tension on the warp, the counts of the warp in comparison with the count of the filling and the picks per inch. Some years ago I stumbled across

MILLIONS OF SPINNING SPINDLES

Sing Cotton's New Song



MILLIONS of busy spinning spindles! They sing the song of cotton's prosperity...of a tremendously increased demand... of new uses.

For example, women are using cotton more than ever before. They are buying cotton sport clothes, cotton afternoon clothes ...even for evening wear the fashion of cotton is growing. They are buying yards and yards of cotton fabrics for home use, for curtains, tablecloths, etc.

Country-wide Interest in Cotton

All over the country cotton is coming into its own. Hotels are using it for sheets and bedspreads, shower curtains and drapery fabrics. The Army is experimenting with a khaki-dyed cotton fabric fully mercerized. For industrial purposes cotton yardage has shown tremendous gains.

How is this new interest in cotton influencing the manufacturer? It is prompting him to style his fabrics. It is leading him to advertise and market his merchandise in a modern, scientific way. *And it is teaching him that in order to do this he should trademark his merchandise.*

In this way the quality and identity of his fabrics are established. The demand is steady and permanent. Inferior goods cannot be substituted. Women prefer branded cotton fabrics, just as they prefer branded foods, face powders or footwear.

Kaumagraph to the Rescue

Kaumagraph has watched with great interest the upward swing of the curve in the graph of cotton consumption. For it reflects the assistance Kaumagraph has given many of the large cotton goods houses in trademarking and identifying their products.

Since 1903 Kaumagraph has aided thousands of manufacturers to trademark beautifully and economically with Kaumagraph Dry Transfers.

If you have a trademarking or identification problem we are at your service—whether that problem is merely the design of a trademark... or the application of a trademark to countless millions of yards of fabric. We will be glad to send you additional information about Kaumagraph Service, especially as it applies to your problems.

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a rule for finding the percentage to allow for warp contraction:

Multiply the picks per inch by 3 and divide by the filling counts. The answer is the percentage to allow for warp contraction.

However, I do not advise the use of this rule, and I am merely embodying it in this discussion to show the fallacy of it, and other similar rules, when applied to actual mill problems. Where the constant 3 is derived from I don't know, and notice, too, that no consideration is made of whether the fabric is to be woven as a plain, twill, satin, or other weave.

At the present time we are slashing 78 yards to secure a 70-yard woven cut of broadcloth. This indicates that, in this particular case, the contraction is:

$$\frac{100 \times 8}{78} = 10.25 \text{ per cent}$$

If we apply the rule to this, a 100x64 construction with 40s filling, we find: $\frac{64 \times 3}{40} = 4.8$ per cent warp contraction, which is only a difference of 5.45 per cent between the actual and the theoretical contraction.

The contraction in width, or from reed to sand roll, depends upon the position of the sand roll (high or low), tension on the warp, temples, weight of drop wires and the counts of the filling in comparison with the counts of the warp, and the sley.

As an example, and to draw from an actual experience, I have woven broadcloth reeded 39 inches to secure a gray cloth 37 inches wide. This shows that the cloth contracted from the width at reed to the gray width:

$$\frac{100 \times 2}{39} = 5.13 \text{ per cent}$$

Or, another way of stating it would be that the broadcloth is reeded 5.4 per cent wider than the gray width required.

The figures 10.25 per cent for warp contraction and 5.13 per cent for width contraction, while not intended to be definitely applicable to the inquirer's problem, should provide him with a practical basis to work on.

Your inquirer's last question wanted to get a suitable sizing formula for broadcloth. I fail to recall a slashing proposition that required more skill in the preparation of size than that demanded by broadcloth. To simply state that the size must be well cooked is not enough; the mixing of the ingredients and the cooking must be thoroughly and properly done, with extreme watchfulness at every stage.

To successfully weave a broadcloth, a well sized smooth supple warp is required. To secure this I would advise, where the finished volume of size is 100 gallons:

80 gallons of water; 56 pounds of potato starch; and 10 per cent or about 6 pounds of compound, the compound to be composed of: 6 per cent softener and 4 per cent adhesive.

In making up a 100 gallon batch of this size, run 80 gallons of water into the kettle. Then, add the 56 pounds of potato starch and allow this to agitate for at least one-half hour. Turn on the steam and adjust the valve so that it will take 30 minutes to bring the mix to the boiling point. Allow the mix to boil, but not violently, for another 30 minutes before using. It is a well known fact that potato starch granules start to burst at about 140 degrees Fahrenheit. Therefore, in view of this fact, it is not well to add any compound until the temperature is slightly above this point.

The foregoing directions, if carefully followed, should provide "G. W." with a good satisfactory size mix for broadcloth.

However, this mix can be improved upon by employing a second starch, which I shall refer to as X. Highly refined and composed of pure Holland and tapioca starch, X enhances the size mix with several desirable qualities, chief among which are an easier method of size preparation, a better penetrating size, an even more supple and smoother weaving warp, and a distinctive, pleasing appearance to the fabric.

When using X in mixing a size for broadcloth, 25 per cent of the weight of potato starch is deducted from the mix and replaced with half of its weight of X. With a finished volume of 100 gallons of size, the ingredients would be:

80 gallons of water; 42 pounds of potato starch; 7 pounds of X; and 5 per cent or 2.5 pounds of softener only.

The 80 gallons of water are run into the kettle and the 42 pounds of potato starch are added. Allow the potato starch to agitate for a short time, say ten minutes, and then add the 7 pounds of X, *very slowly*. Twenty minutes later the cooking can be started. Allow 15 minutes to bring the mix to a boil and another 15 minutes of boiling, but not violently, before using. Add the softener when the mix has passed the 140 degrees Fahrenheit mark. In passing, I might remark that I have eliminated the softener entirely when using X, though your inquirer may not care to do so.

When using either of these size mixtures, it is important to keep the same level of size in the size vat. Also, the temperature of the mix in the vat should always be between 190 and 212 degrees Fahrenheit.

CONTRIBUTOR NO. 4704.

A Delayed Reply to Old-Timer.

EDITOR COTTON:

The following was inspired through reading "OLD TIMER'S question in the April, 1929, number of COTTON—"Would you hire yourself for your job?"

In the dim past a certain boy, between nine and ten years of age, was taken out of school and put to work in a cotton mill. He little realized that his school days were over, and that henceforth he would work seventy hours per week for several years at the munificent wage of nine dollars a month, providing there was no lost time. He enjoyed his work and had a good time, but one day he got the scare of his life. The boss came along and took him by the collar and marched him down the room to the middle stairway—the room was about 500 feet long—thence down stairs, without saying a word until the next floor was reached, then he said, "You will be back boy for Joe Higham and will be paid ten dollars a month."

Joe was a fine man to work with. He paid his back boy fifty cents a month to help him keep up his ends, and to get his breakfast every day and his beer. When the boss told this boy that he was to get ten dollars a month he could hardly wait for stopping time to tell the good news to his folks.

After working at this larger job for about six months he was transferred to the weave room, where he learned to twist in warps, becoming very skilful at it, and could earn up to $1.25 a day. Not bad for a boy of thirteen years those days. Learning to twist was a great help to him in later years as a beamer tender. At this time he began to realize the need of an education, so began attending night schools so as to be able to read intelligently and to solve simple problems in arithmetic.

From twisting in warps to beaming room was the next step. Here the boss made the mistake of putting him to help twist in a broad warp, thereby antagonizing the beamer tender, who resented having a boy doing a man's work. So he was not allowed to do any more twisting, but was put to work splitting warps, keeping the room clean and helping on the shipping. Not being strong enough to handle the shipping he was transferred to the picker room, where he worked for over a year. In this picker room every bit of cotton had to be weighed and then spread between certain marked slots on the lattice of the finisher picker. The evening was done by hand and good yarns were made.

We next find him in another mill, where for a few months he tends the boiler, helps in dyehouse, machine shop, spinning room and beaming room. Not having much to do, he is given the extra task of oiling the main lines of shafting in the carding and spinning rooms, also keeping the warpers supplied with spools, for which he is allowed one hour nooning, instead of the regular half hour. "Them were the happy days."

He then learns to operate a mill, or circular warper. Here he learns how to link warps and to put up yarn in various forms.

At the age of sixteen we find him in the weave room of a gingham mill where he becomes a weaver; weaves for a few months and then is transferred to the warper room and runs a pattern warper; also learns how to draft patterns.

Gingham warping in those days was a high-class job, with good pay. Some months the warper tenders would make more pay than the boss would.

The next step from warping was to weaving again at another mill for a few years; then to beaming for several years; became overseer of beaming, warping, spooling, twisting, etc.

Our young man is now studying the cotton mill business, to be ready for what time might bring forth. He completed a course with the I. C. S., another one with the American School of Correspondence and recently one in Industrial Management, with LaSalle Extension University, and is still studying. After working over 25 years for one company in various capacities, and reaching the limit of promotion there he decided to make a change. The change was made which gave him a broader knowledge of his chosen line of endeavor. Different methods of applying the principles of cotton manufacturing were noted, some of them good and some not so good. Stiff opposition was encountered to proposals for betterment. The opposition at times, was so strong that if he had not had the courage of his convictions and a bull dog determination to win, he would have been licked, *and the "I told you so's"* would have wagged their heads in glee. Well, not to bother you too much, the writer will mention a few high spots in this man's career.

First. Five years after making the change his former superintendent met him and, at the conclusion of a pleasant hour, in talking over old times, said, "We miss you. Production has fallen behind."

Second. Tough job. Mill losing money through wrong methods. Took nearly one year to straighten things out. Stiff opposition encountered. Agent trying to block every move made towards efficiency that he could not be credited with. After a few hectic years lost this job through being "Johnny on the spot."

Third. Big job. Increased production from 79 per cent to 90 per cent by paying the doffers on warp spinning one dollar per week extra. Could not better the quality. Stock not suitable. Machinery in its dotage. Had been running 55 years.

Fourth. At another mill. Increased production 31 per cent. Stock and quality A-1. Good machinery. Left for better paying job.

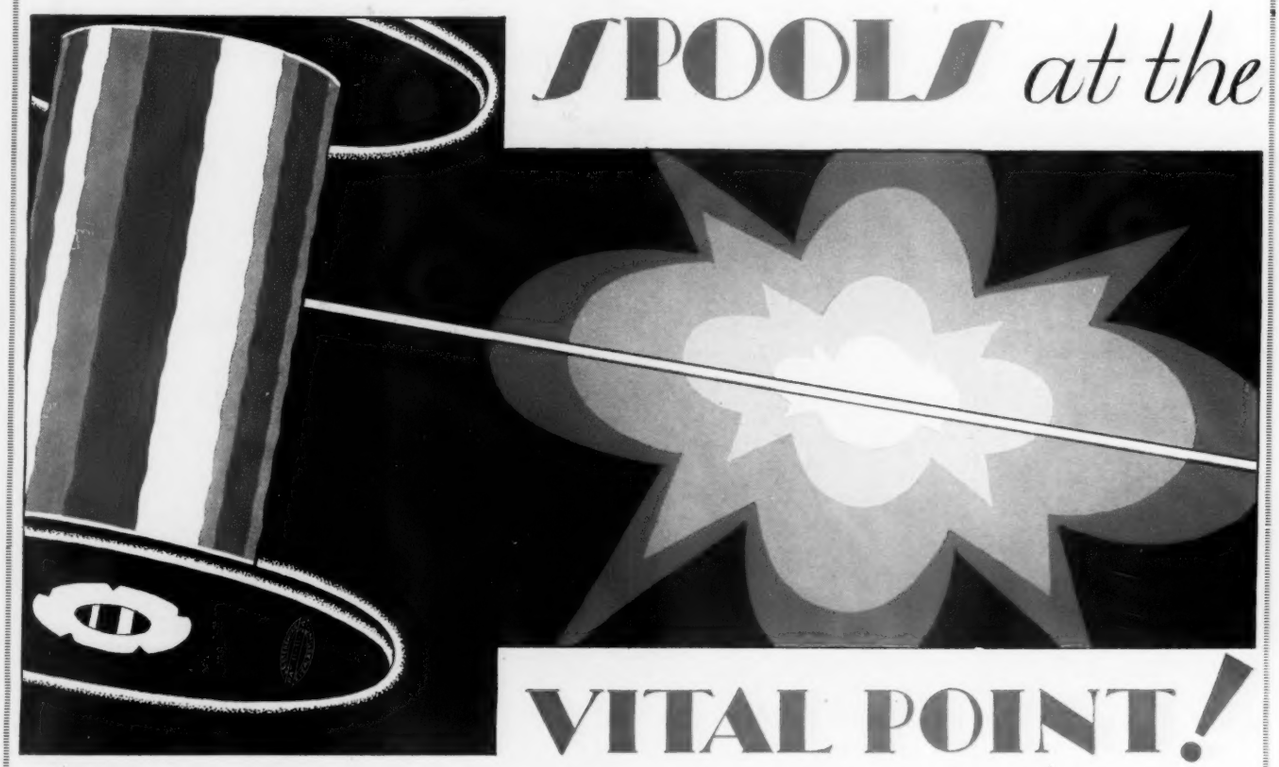
Fifth Mills undergoing rearrangement of machinery. Throwing out old machines and replacing with second-hand machinery that had been in operation for thirty years, which showed poor judgment on the part of the management. Chaos all around. Graft in evidence. Got things straightened out in about one year, with looms all running and yarn to spare. Mills could not stand the strain of after-the-war adjustments, so lost out.

Sixth. Received call to a mill in serious trouble. Looked the situation over and decided that the task of getting things in shape to make good yarns once more was not entirely hopeless. Accepted the call and started in to straighten the tangle out, which was an exceptionally bad one. Some of the machines were very old and decrepit. The finisher picker was troubled with indigestion, rheumatism and nervous prostration. The cards also were in a deplorable condition, so also were the spinning frames. After five months of extremely hard work, both mental and physical, he got everything running smoothly and turning out high class yarns with production above the average. Relations with the management and help were all that could be desired. Retired a few years ago, but still interested in what is doing in the mills.

"OLD TIMER," the writer of the foregoing believes that a man who is mentally and physically fit, who always takes an interest in his work, one who combines his experience with what he can gain from the experience of others, keeps up with the times in his reading matter and is willing to cooperate to the mutual advantage of all concerned would be one who could be relied upon, regardless of age.

The writer is not looking for a job, and has none to give, but he would not hesitate to hire himself, because he knows that he could rely on his hired man to deliver the goods. J. J. B. (MASS.)

PROTECT YOUR PRODUCTION *by installing* LESTERSHIRE *SPOOLS at the*



VITAL POINT!

THE source of breaks and weak spots in the finished fabric is often discovered to be faulty spooling of the yarn. Here is a vital point in production, for if yarn unwinds in jerks these breaks and thin spots are inevitable in the finished production.

The use of Lestershire Spools eliminates trouble at the loom. It is a question of spool construction . . . of remarkable accuracy in the designing and building of Lestershires.

Lestershires, therefore, are true-running spools. The yarn winds on evenly. And it unwinds evenly, steadily, at uniform tension. "Thinning" the yarn through stretching, or actually breaking it, is avoided.

Mills equipped with Lestershires earn an extra dividend from spooling. It consists of better quality in fabrics, and a saving of time and trouble.

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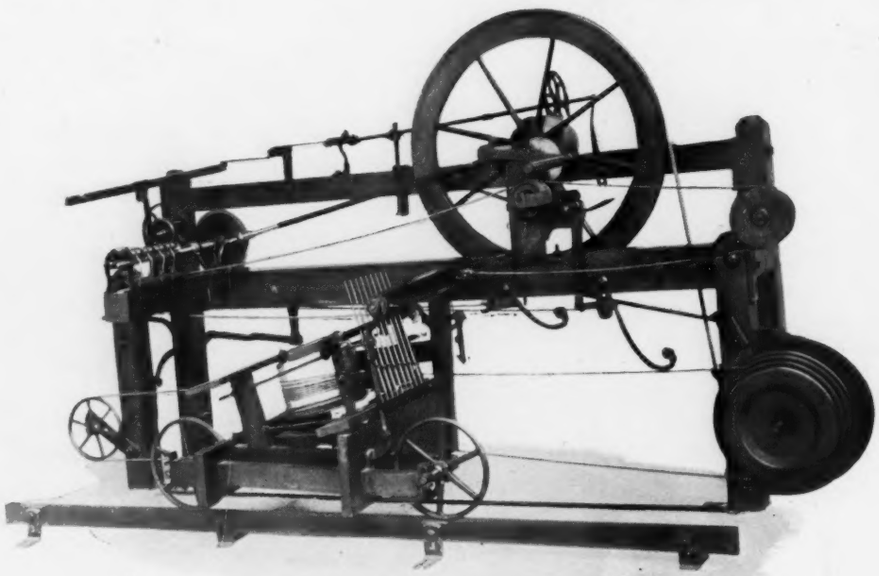
Pictorial History of Textile Machinery

By Prof. Chas. E. Mullin, D.Sc.
Clemson College Textile School,
Clemson College, S. C.

Part VI

(Editor's Note: This is the sixth of a series of features in which illustrations of the earlier models of regular textile machinery, together with brief descriptions, will be presented. The photographs and information were secured by Dr. Mullin on a recent trip to Europe. It is felt that these interesting photographs of old machinery will be suitable for filing or framing by the reader.)



Crompton's Mule Spinning Frame

(A replica of an old machine)

FROM THE COMBINATION in this machine of Paul's method of drawing out the roving by rollers and Hargreaves' reciprocating carriage, it was called a "mule." It was invented by Samuel Crompton of Bolton, England, between the years 1774 and 1779.

The important principle is that the lengths of roving are held between the ends of the spindles and the front pair of rollers, without strain, while the amount of twist necessary to give strength to the yarn is put into it by the revolution of the spindles. Hargreaves drew out the roving and twisted it at the same time in the outward movement of the carriage, and Arkwright used Paul's roller method to draw out the roving, winding it on the spindle by a flyer arm. Both of these processes put more stress on the thread than the finer counts would bear without breaking.

This machine is arranged for working by hand, but there is a fast and loose pulley for driving by power, with a wooden lath to shift the fork. The handle on the shaft of the big rope pulley is turned in a counter-clockwise direction. From this axis, by bevel gearing and an inclined shaft, the rollers receive their motion.

There are three pair of rollers through which the rovings are drawn from bobbins which are held in a frame, not shown in this machine. The front pair revolve at three times the speed of the back pair, and the middle pair are idle. Thus the roving is drawn three times finer in passing through the rollers. The spindles are carried on a carriage which is moved to and fro on rails by means of two cords, one end of each of which is fixed to the carriage and the other to a helically grooved drum. The drum is rotated by spur gearing, having a speed ratio of 1 to 9, from the main driving shaft.

A crossed rope from the big pulley drives a speed pulley which is carried on an arm, slotted for adjustment, bolted to the frame. From the speed pulley an endless rope passes once around a pulley fixed to a tin drum and around a fixed pulley at the other end of the frame. From the tin drum bands work on to wharves on the spindles. The speed pulley allows a varying amount of twist to be put into different qualities of yarn.

The action was as follows: A roving was fixed to each spindle and led off from its top end. The handle being rotated, the rovings were delivered by the rollers and the carriage traveled from left to right at the same speed as the rollers delivered, the spindles at the same time rotating to twist the roving. This went on until a projection on the carriage came against the curved arm of a stop lever, which caused the roller gearing to be put out of gear and so stopped delivery of rovings. The carriage then went on, stretching the length of yarn held between the spindles and rollers, and now strong enough by reason of the twist put into it to bear this strain, until the carriage came against another curved lever arm by means of which the helically curved drum which traversed the carriage was put out of gear and so the carriage stopped. The spindles still went on turning, giving more twist and so shortening the length of yarn which was being spun. While this was going on the carriage received a slight receding motion to the left in order to avoid strain on the yarn. This machine is in a British museum.

How Do You Control Bad Work from the Card Room?

Here is a universal problem, and you are especially invited to tell us of your methods and experience on it.

EDITOR COTTON:

We have a problem in our mill which we should like to have discussed in the "HOW OTHER MEN MANAGE" department. The problem is: how to control the bad work which comes from the card room to the spinning room; that is, the slugs, black oil, etc., in the roving. We pay our spinners a premium for picking bad roving out of the creels. This roving is returned to the card room and is inspected there.

We would like to get from some of your readers their experiences and methods in controlling this bad work. We should be glad to have them go into detail describing methods they have found best in preventing these defects, as well as in handling them after they appear. I might say that we are on white yarn, coarse to medium numbers.

CONTRIBUTOR NO. 4759.

How to Prevent Good Waste Going in Dust Room.

Two answers to this question. If you have had a different experience on this matter, tell us about it.

EDITOR COTTON:

Too much good waste in the dust room, as experienced by "H. F. (N. C.)," who told us of his experiences in the March, 1930, issue, is nothing new. The trouble as a rule is first noticed after a fire in one of the machines, or after the removal of one or more of the cages. The linings around the cages not being properly adjusted will also give rise to this difficulty. Good places to look for this trouble are at a point under the upper cage or over the lower cage where the air current is the strongest.

I would go about locating the trouble as follows: Remove all castings about the cages and with a No. 5 leaf gauge circle under the lining of each cage. Any space found calls for a closer adjustment, or otherwise good stock will be conveyed to the dust room.

WASH (R. I.)

EDITOR COTTON:

I have had the same trouble that "H. F. (N. C.)" is having, as stated by him in the March issue of COTTON. That is, losing too much good waste in the dust room. I will try and tell him how I stopped this.

The first thing I did was to put a piece of light leather around my condenser screens at both ends—the piece of leather used was about 2½ inches in width. I then put a cotton tie around the piece of leather and pulled the ends together with a ¼-inch screw. That will certainly stop any stock from getting through the ends.

I would advise "H. F." to examine his condenser to be sure that there are no small holes caused by broken or bent wires. He might also try cutting down the speed of his fan. I have a No. 6 fan running 1,400 r.p.m., which pulls cotton through a vertical opener, two Murrays, 18 feet of cleaning trunk and 125 feet of pipe, and I never have any trouble with choking up.

CONTRIBUTOR NO. 4737.

Men and Their Methods.

EDITOR COTTON:

One thing that I can't understand is why some mill men are continually grouching about depression, hard times, narrow margins, etc., when facts point out plainly that this is not a universal condition.

Of course most anyone will admit that there is somewhat of a state of depression existing in the textile industry at the present, brought about by violating the law of supply and demand, but it is a noticeable fact that some mills are much harder hit than others, hence this condition cannot be termed universal. It merely denotes difference in men and their methods. It proves that some men are thinking while others are not.

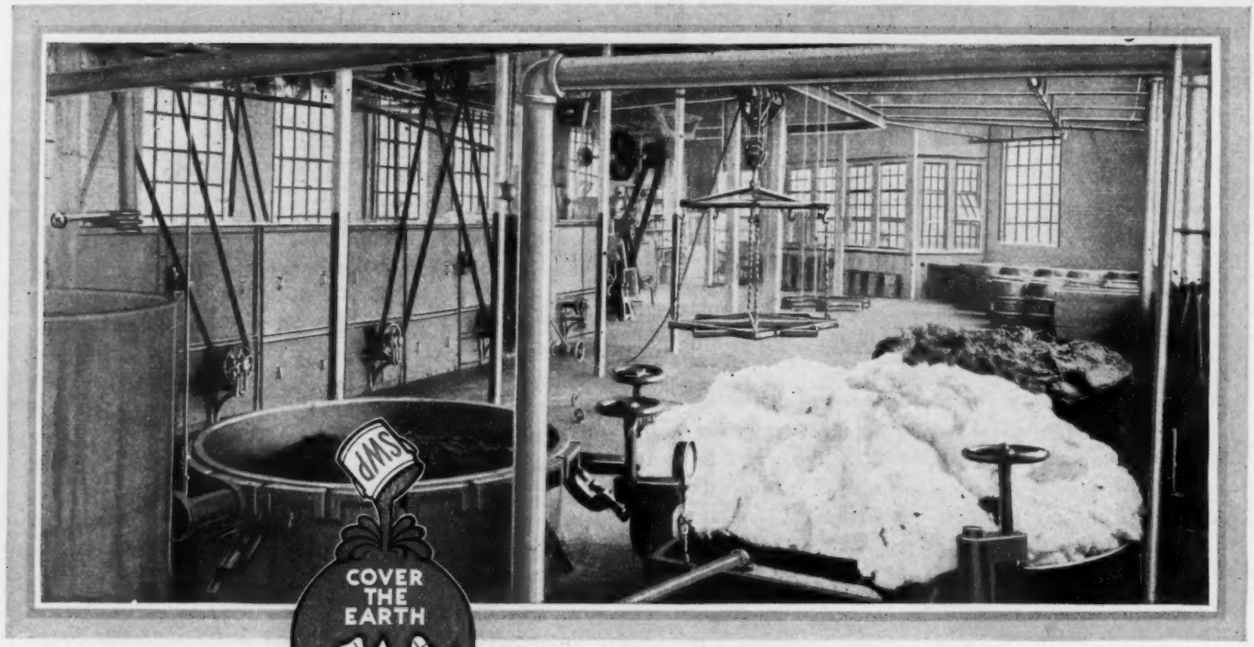
If a careful analysis were made of all of the superintendents of the different mills throughout the country and it were possible to determine which of the superintendents were working and which were thinking, and, by then looking up the status of these men's mills, I am sure that a great step would have been made in determining just what constitutes a successful executive.

Only a short time ago one of the greatest leaders of industry in this country, while being quizzed about certain phases of his business, electrified his questioners with the reply, "I don't know." They were at a loss to understand how a man could possibly mount such industrial heights and yet be unable to answer some of the questions they had asked him, questions pertaining directly to his business.

However, when this industrial leader explained to them what folly it would be for him to try to master all of the minor details concerning his business, for which he paid department heads good money to know thoroughly, they began to see the logic of this man's system. After listening to this man for a few moments most of them realized that a successful executive must possess the following qualifications: (1) Ability to hire capable men; (2) ability to think; (3) ability to co-operate with subordinates; (4) a good general knowledge of his business.

If all of our mill superintendents and other executives could be made to realize the value of the aforementioned qualifications, I believe that I could conservatively predict an increased era of prosperity for the textile industry.

For a superintendent to be successful in the face of present conditions, I think it is necessary that he delegate responsibility to others, wherever it is practicable. I have seen many instances, especially in some of the smaller mills where the superintendent was busy from daylight to a late hour at night, fussing with details—allowing himself no time at all for thinking. Yet, enough profitable changes and improvements were taking place every day in well organized mills throughout the country to furnish the poor fellow with food



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for thought for many months, if he had only had time to think.

The trouble with this poor man probably was that his superior had a talk with him about overhead, labor turnover, payroll, etc., and he, in his state of nervousness, developed the idea that he must get in there and work the mill out of the hole by performing manual labor. The hard part is that—after he has been discarded—he will probably discover that he had been too busy all of his life to run his job as it should have been run.

Instead of a superintendent devoting so much time performing duties that the operatives or his subordinates are supposed to take care of, would it not be much better for him to give the proper thought to the matter of hiring overseers, or promoting them from the ranks, as the case may be, thereby getting men capable of taking responsibility and really accomplishing something? The country has plenty of men who are brimful of energy and ambition and the mills that have such men are the mills that have few complaints to make about hard times.

No man is physically big enough to run a mill alone, but there are thousands of men who can run them profitably through the use of their mental resources. To run a mill it is essential that a man have help, to run it successfully he must have the right type of help, and I believe that 90 per cent of them are the right type if they have been properly trained.

Some mills are on the verge of bankruptcy today simply because of bad management. If a superintendent is to bring his mill through with flying colors in present-day conditions, it is imperative that he think and study. He has no time to wilt his collar fussing with minor details. He should work out a plan whereby all detail work that can possibly be shifted from his shoulders be placed on the different overseers, thereby giving him time to think out the larger problems pertaining to profitable management. I do not think that in doing this he would be accused of "letting George do it," because he would be far from being an idler. Further, I believe that if he had the right type of men as overseers, men with the proper degree of ambition, energy and loyalty, that they would welcome such a plan, for such men like for responsibility to be placed upon them.

In many cases a bad manager can be detected through a mere hand shake. If he is successful, he will grip your hand heartily and smile, but if the condition of his mill is not so good he will have the appearance of a very busy man who isn't feeling well, and really hasn't any time to spend with you. In reality, he wishes you would be gone before you uncover some skeletons in his closet.

Well, I think it quite true "that you can fool all of the people some of the time, some of the people all of the time, but you can't fool all of the people all of the time." If there ever was a time when we should be true to ourselves and face facts, it is now. Yet how I would like to know how many superintendents we could find who would answer the following questions truthfully: Since you have been with your mill, what has it paid your stockholders in dividends? Does it compare favorably with other mills on the same grade

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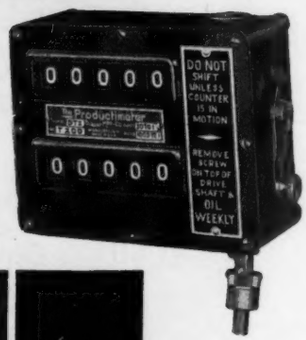

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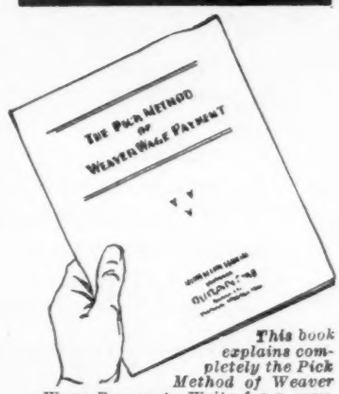

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of goods? Are you making a uniform standard quality product, at as low cost as your competitor? Has your mill a good reputation in the market?

We must face facts squarely. We, as superintendents, are directly responsible for the answers to the aforementioned questions, and our answers tell whether we are to be put in the class of successful mill men or in the class of failures. If our answers do not appear good enough, we should not be too stiff-necked to take notes from mills that we know are on the right side of the ledger. After all, that is the way we all learn—by watching and listening to others.

I do not think we are lazy, but we do spend too much time doing the things that the overseer or second hand, or probably a sweeper could do just as well.

CONTRIBUTOR No. 4661.

Break Draft.

This man found no improvement of a permanent nature in increasing his fly frame break draft. What's your experience?

EDITOR COTTON:

There has been quite a bit said and done here lately about break-drafts, so I feel that I will not be shooting amiss to take my pen in hand and jot down a few of my thoughts and experiences.

Sometime ago the writer experimented quite a lot on roving and spinning frames. On the roving frames we went from a break-draft of 1.04 to 1.14, and then ran a test on the warp spinning for breaking strength. The test showed the yarn to have greater breaking strength, but it also showed it to be heavier. After experimenting rather extensively, we could not conscientiously say that we had gained anything, although at times it seemed that the yarn was more even and regular in breaking strengths. That is, there was a smaller range of variation.

Another thing that we found was that the middle top leather rolls were wearing more than when we used a draft of 1.04. It seemed that the increased speed of the steel roll had a tendency to chafe the leather on the top rolls, which caused the laps to come undone and the rolls to tear up.

T. A. D. (GA.)

Replies to Questions on Spinning and Carding.

Opinions on worn spinning rings, card grinding, stripping, and taking care of comb boxes. What are yours?

EDITOR COTTON:

In the March issue of COTTON, "T. A. D. (GA.)" stated that he was in trouble and would appreciate someone answering the following questions for him:

(1) If the spinning rings become worn does this have a tendency to weaken the yarn?

(2) Do the traverse grinder rolls on the cards sharpen or grind the points on the card clothing, or does the clothing sharpen itself against the grinder rolls?

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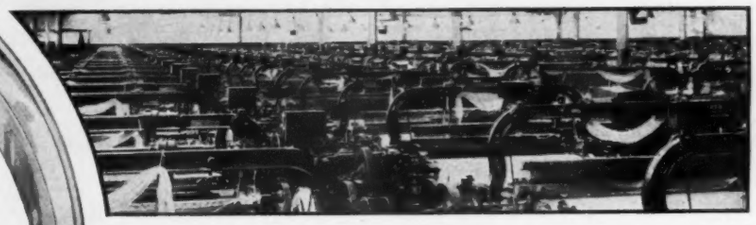
MULTIPLY GAINS▲



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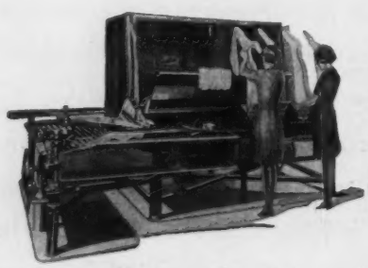
The superior efficiency of the method, and the resulting economy, count in enabling Hanes to give so much value in hosiery at a moderate price.



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(3) Do cards stay sharp longer when stripped with the old time band and hand stripper than when stripped with vacuum strippers?

(4) How often should the comb boxes be oiled? How often should they be cleaned?

My answer to the first question is yes. We all know that the winding of the yarn on the bobbin is accomplished by the lagging behind of the traveler. It is therefore necessary for the yarn to drag the traveler around, and it is easy to see that the more waves on the ring, the more friction there will be created by the revolutions of the traveler, which naturally places more strain on the yarn. A worn ring causes many ends down that would not have been down otherwise. In some instances where we have good staple cotton, the yarn will stretch considerably but will not break. This stretching then causes thin places in the yarn and this of course weakens the yarn very noticeably.

In answer to his second question I would say that it should always be borne in mind that the grinding power is in the emery grain and when the sharp points of the card clothing are worn off, the emery is no longer capable of doing its work and it will be cheaper in the end to replace the old clothing with new.

Next in grinding importance to the emery on the traverse grinder would come speed. "T. A. D." should see from the following speeds, which have been almost universally adopted, that the clothing does not sharpen itself against the grinding rolls:

Cylinder, 165 r.p.m.; doffer, 340 r.p.m.; and traverse grinder, 700 r.p.m.

I do not believe that either system of stripping has ever robbed the teeth of their fine points because the teeth of the stripper clothing point in the same direction as the teeth of the doffer and cylinder clothing during the grinding process. That is why it is necessary to give the stripper roll a greater surface speed than that of the cylinder or doffer in order to strip them. Under such conditions I fail to see how the stripper could dull the clothing. In setting the stripper into the cylinder or doffer it should be seen that the wire does not descend into the clothing deep enough to bend or knee the wire. The correct depth is about ⅛-inch.

It is very difficult to answer "T. A. D.'s" fourth question on account of the great variation in doffer comb speeds and the grade of oil used. The condition of the band and comb box must also be considered. The least vibration will cause oil to fly from the comb box. A tight band, worn eccentrics, poorly repaired comb or too high speed will cause vibration. However, I would say that the very best grade of oil should be used and that the comb boxes should be inspected Monday and Wednesday of each week and the necessary amount of oil added to each box.

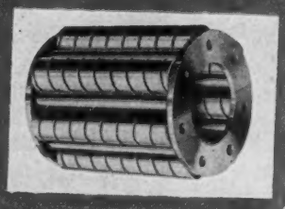
Comb boxes should be cleaned when the cards are being ground. A ¼-inch rod that has the end covered with flannel should be used for this. By continually turning the rod in the box the flannel will collect most, if not all, of the foreign matter.

WASH (R. I.)

EDITOR COTTON:

In the March issue of COTTON, "T. A. D. (GA.)"

Bearing Makers Advise It



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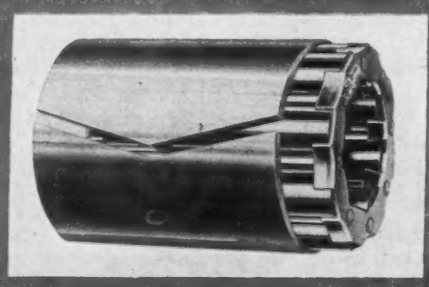

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Today, almost every family owns an automobile, and in buses, street cars and subways—high speed machines operated by man power—worker and aristocrat travel side by side. Machinery has liberated man from slavery and drudgery, has manufactured innumerable commodities for comfort and convenience, has brought higher standards of living, lower prices, more leisure time, and a more general distribution of wealth.

Because machine methods are faster, easier, cheaper and more efficient, in textile mills particularly, they are rapidly replacing hand methods of labor.

The Termaco machine will clean any size of roving bobbin at the rate of 50 bobbins a minute. The valuable time of spinners responsible for production, no longer consumed on the unskilled labor of bobbin cleaning, results in a substantial increase in manufactured output. The machine also effects tremendous savings in reducing the amount of roving waste and in reworking waste ready for use when it leaves the cleaner. Staple is not cut and bobbins last indefinitely. The hundreds of Termacos now in daily use evidence their merit in helping mills cut costs.

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The Type K machine, for cleaning both plain and automatic loom bobbins and certain kinds of warp bobbins, has a daily capacity of 60,000 bobbins.

Write for complete information about these machines. In writing, state whether you are interested in cleaning roving or filling bobbins, and if possible, send a sample of the particular bobbin you have in mind. If you are interested also in motor-driven machines, give full details, including voltage, phase and cycle of your current.

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asked several questions about spinning and carding that interested me very much. So much so, that I am going to attempt to answer them.

In his first question he wanted to know if worn rings weaken the yarn. The shortest and best answer that can be given to this question is, yes. When our spinning rings become worn to the extent that they have a wavy appearance, experience has taught us that it is advisable to "heavy-up" on the travelers to some extent. And when our rings get in such a condition, a close examination will reveal that our yarns contain thick and thin places. Any yarn with thick and thin places in it is not as strong as a uniform yarn, for as the old saying "A chain is no stronger than its weakest link" is applied to a chain, we might apply the same reasoning to a yarn and say a yarn is no stronger than the weakest place in it. Therefore, I would advise "T. A. D." to get a good spindle plumber and overhauler and, where it is necessary, replace the worn rings with new ones.

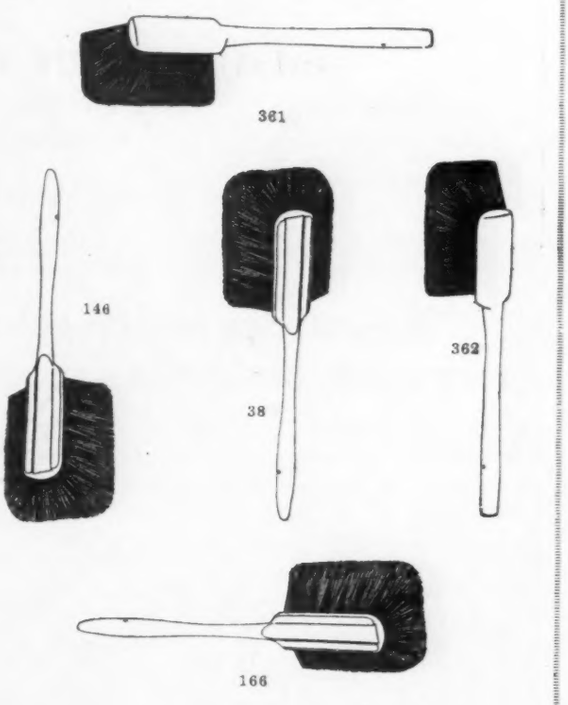
His second question read, "Do the traverse grinding rolls on the cards sharpen the points of the card clothing or does the card clothing sharpen itself against the grinding rolls?" This is an interesting question and one that calls for much thought and reasoning. I would think that the cylinder and doffer to a small extent sharpen themselves against the grinding roll, but the major portion of the sharpening is done by the grinding roll. I draw this conclusion from the fact that if the belt that is driving the doffer breaks, or gets pushed off, and the traverse roll is allowed to run continuously for a short period of time across the doffer, it only requires a short time for a streak to be ground across the face of the doffer. It will take two or three days of ordinary grinding to grind this streak out.

If the traverse rolls are stopped it will take an indefinite period to perform the act of sharpening the points of the card wire just by the friction that would be caused from the rubbing of the face of the cylinder and doffer. Thus it is easy to see that the traverse roll does the greater part of the sharpening.

In his third question "T. A. D." asked of our experience with vacuum card strippers and whether or not our cards stay sharp longer than when stripped with the old time band and hand stripper. I believe the old type rope and roller stripping brush will keep the cylinder and doffer cleaner than the vacuum system due to the fact that it will remove foreign particles such as motes, sticks, and other small particles that lodge between the teeth of the card clothing. As to which system will cause the cards to stay sharp the longest, I cannot say. We find that the best time to grind a card is just before it needs it. If this is carried out and the settings on the card are okeh a good clean sliver will be the result.

"T. A. D.'s" fourth question was, "How often do you oil your comb boxes, and how often do you clean them out?" This question is often discussed within the mills but I do not recall ever having seen it discussed in any of the textile journals.

Comb boxes should be oiled whenever the oil begins to get low, for it is when the oil gets low and the temperature runs rather high on account of fric-



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April 25, 1930.

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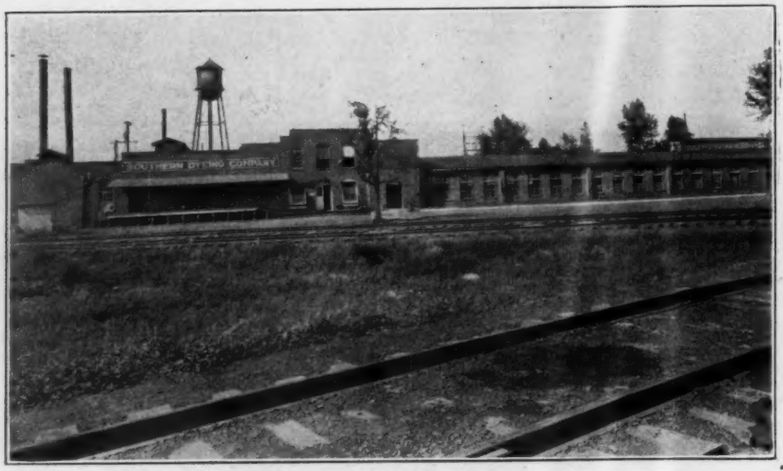

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tion that serious damage is done to the "guts," as termed by some people. Many overseers require their grinders to examine their comb boxes daily, and this is a good practice for many times it enables the grinders to find minor defects in time to prevent major ones. In going over the boxes, if any are found to contain below the normal amount of oil they should be filled. Care should be taken, however, not to run the box over.

I have heard a great diversity of opinions expressed as to how often comb boxes should be cleaned. I have heard some say every three months, others every six months, while some advocate only once a year. I should think that the best method would be to watch the oil and when it seems to be getting thick with ground steel or real black and heavy it would be wise to clean them out. When oil begins to stiffen it is reaching the point where it is no longer fit for lubrication. I think a good practice is to clean the boxes every six months, giving them a good thorough cleaning once each year.

J. R. (GA.)

More Comments on Ring Size for 50s.

What do you think is the largest size ring that can be used for spinning 50s? This man gives his idea. What's yours?

EDITOR COTTON:

In reply to the inquiry from "CONTRIBUTOR NO. 4667," who wanted to know the largest size ring that could be practically used in spinning 50s warp yarn, with four × the square root of twist and made from 1 3/16-inch cotton, without injury to the yarn, I quite agree with "BOB (GA.)," who replied in the February issue, saying there are many factors that have a direct bearing on the ring size.

I have spun 50s yarn on a 1⅝-inch ring, using about 23 or 24 turns of twist, a roll speed of around 106 r.p.m. and a spindle speed of around 8,300 to 8,400 r.p.m. and considered the yarn made very satisfactory. On a No. 2 double flange ring, I have used a 13/0 traveler, A-1 circle; on new rings, about a 19/0, gradually working down to the 13/0.

This twist, as "CONTRIBUTOR NO. 4667" can see, is considerably less than four × the square root. If I were to increase twist to four × the square root, I would increase the spindle speed proportionately. I do not have the exact figures available for the correct bobbin diameter for a 1⅝-inch ring but I believe that a ¾-inch bobbin will be all right for this size ring.

I am of the same opinion of "BOB (GA.)" in that I do not believe "CONTRIBUTOR NO. 4667" would have any trouble spinning 50s on a 1¾-inch ring. This is only my opinion, for I have not tried it.

An increase in ring diameter very often calls for a reduction in spindle speed. A larger ring usually demands a lighter traveler, but an increase of bobbin diameter to 1 1/16-inch barrel might offset this.

In spinning 50s I do not believe it would be advisable to use a flange smaller than a No. 1 flange, for in using anything smaller, I believe the travelers will cut into and wear the rings away too fast. In spinning this number I have found that very good results

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Rockweave baskets, hampers and trucks are built to take all the rough treatment you hand them. As a matter of fact, before we make any Rockweave product, we subject the material to the same severe tests that you yourself give. Then we're sure that the products will stand up under the knocks and bumps, under the strain of heavy loads and day-in, day-out service.

These baskets couldn't undergo such tests if the material weren't so carefully selected, and skillfully manufactured. To begin with, every bit of canvas is our own Triumph Duck, a strong, hard-wearing material made right here in the mills. Frames are made of round, specially tempered spring steel, and resilient galvanized strap bands riveted both crosswise and lengthwise to the frame—the most protective bottom yet devised. Top rims are bound with chrome leather. Basket shoes can be replaced when worn.

You pay no more for the better, longer service Rockweave products assure. . . . If you are interested in these baskets, trucks, and hampers or in any other Rockweave product, we shall be glad to send you further information free. When you write for catalog, or send your order, address

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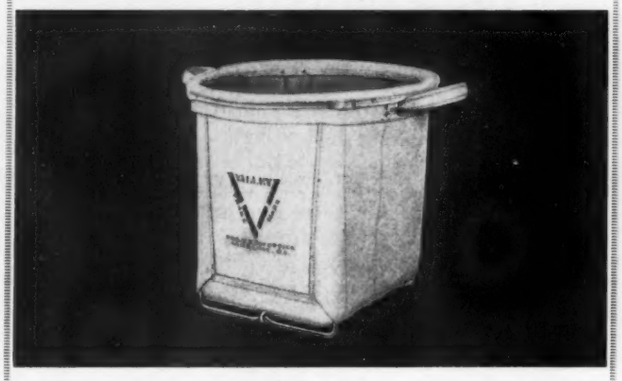
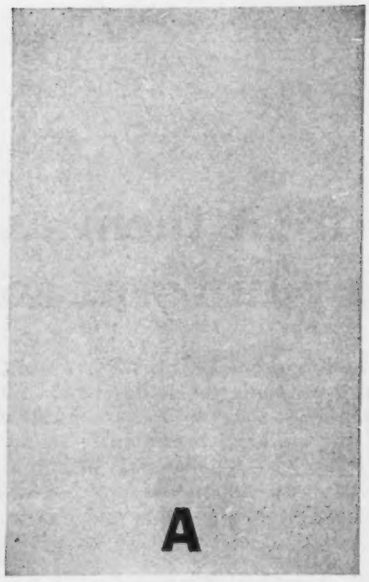
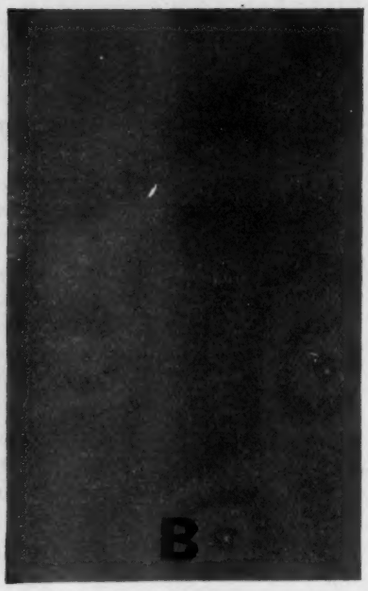




Du-Lite dries smooth and hard . . . . without dust pockets where dirt can lodge to darken walls. It keeps your walls looking like this.

How long before your WALLS will look like B?



This section of a wall shows how a rough painted surface catches dust and dirt. Walls soon get dingy and dark. Lighting is less efficient.

◆ ◆

Are your walls protected by a hard, smooth surface? Or are they darkened by a gritty finish that catches dust and dirt and resists cleaning?

◆ ◆

RUB a damp cloth over a surface of your mill wall and see the path it leaves. Ordinary paints and mill whites have an affinity for dirt and dust. They dry to a gritty finish that has tiny pockets just large enough to catch the minute particles that are suspended in mill atmospheres.

This is one of the common faults of paints that du Pont chemists set out to correct. Obviously, their new product must be made to cover smoothly with a harder surface that would afford no lodging for tiny dust particles. Exhaustive tests revealed a new treatment for certain vehicles that improved the drying qualities of the finished product —so that Du-Lite dries to a hard, tile-smooth surface.

This is one of the qualities of Du-Lite that keeps mill walls white. Its tile-like surface sheds dirt. There are no rough spots—no dust pockets where dirt can collect, later to darken the entire surface and reduce the lighting of the mill. And these rough spots that ordinary paints form on a wall are difficult to clean. They not only catch dirt, they hold it so that washing does not restore its original whiteness. But count this ease of cleaning Du-Lite and its resistance to dirt adhesion as but one improvement upon ordinary mill whites and three remain.

The Value of Pre-Testing

Du Pont chemists were thorough in pre-testing this product. Many months were consumed in laboratory tests, analyzing materials, comparing results, and determining the precise formula that combined not only resistance to dirt adhesion with ease of cleaning but also—

Resistance to yellowing that adds equally as much to the life and brightness of Du-Lite on the wall.

Hiding power and spreading power to reduce the paint cost per unit of area covered.

Ease of working to lessen the labor cost in applying Du-Lite.

Du Pont pre-testing first determined the job that Du-Lite mill white must do for you . . . and then scientifically determined the formula for the ultimate mill white—Du-Lite.

But pre-testing is doing more. It leaves no batch of paint to chance. Testing goes on every day—all raw materials, every process, every finished batch is checked. Every gallon must conform to the predetermined pre-tested standard that is established by du Pont. The result is that every saving that Du-Lite will make for you is practically predetermined.

You can get Du-Lite in Flat, Eggshell, or Gloss finish and also a specially prepared, flat-drying undercoater. You can apply it with spray or brush. Under the brush it flows smoothly, evenly—with never a pull. Du-Lite is equally effective on wood, plaster, brick, concrete and metal surfaces. Repeated washings do not affect its bright, hard surface.

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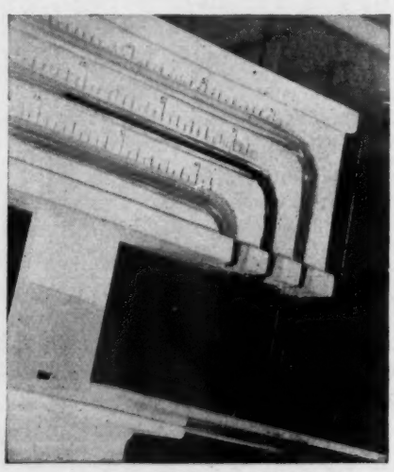
If you are interested in the proper maintenance of plant interiors, write E. I. du Pont de Nemours & Co., Inc., Dept. C6, Independence Square, Philadelphia; 2100 Elston Avenue, Chicago; Everett Station No. 49, Boston; 351 California Street, San Francisco.



One of the precision instruments used in pre-testing du Pont finishes.

DU PONT

DU-LITE

can be obtained with even a No. 2 flange.

As to the number or weight of traveler, as well as the circle, "CONTRIBUTOR No. 4667" has received several suggestions, so the best thing for him to do is decide upon the best of those suggested after a little experimenting.

On a 1½-inch ring, No. 1 flange, I use a 10/0 traveler, 5/8 circle. I believe that "BOB (GA.)," "T. R. (S. C.)" and myself agree on the size circle. On a 1⅝-inch ring, No. 2 flange, I use an A-1 circle traveler.

I would like very much to see 50s spinning on the 2½-inch diameter ring, No. 1 flange, that "T. R. (S. C.)" suggested. I have never seen anything like that.

I believe that preparation of stock, whether combed or carded, humidification, and many other factors have a direct bearing on the ring size, as all of these factors must be considered very vital in order to obtain good spinning. Under normal conditions, however, I would advise "CONTRIBUTOR No. 4667" to use either a 1⅝-inch or 1¾-inch ring. I believe that he should also take into consideration the length of time he intends staying on this number. He might desire a little later to change to a finer or coarser count.

Whatever "CONTRIBUTOR No. 4667" adopts, I hope that he will allow us to see in COTTON what he has adopted and tell us of his success with it.

CONTRIBUTOR No. 4709.

Report of Meeting at Selma

(*Continued from page* 913.)

S. L. McCracken said that he only cleans his rings when he turns them, and that he did not believe anyone should change the size of traveler after a ring had been set up to run to a certain circle traveler. "I believe, too, that many of us have a tendency to disregard the little things in a cotton mill," Mr. McCracken said, "and it is these little things that really make up a cotton mill." He expressed the opinion that too many people think too much of the noon hour, and then just as soon as this is over think of night. They like to believe that all difficulties encountered will eventually adjust themselves. "We should put more time on our own particular jobs," he said.

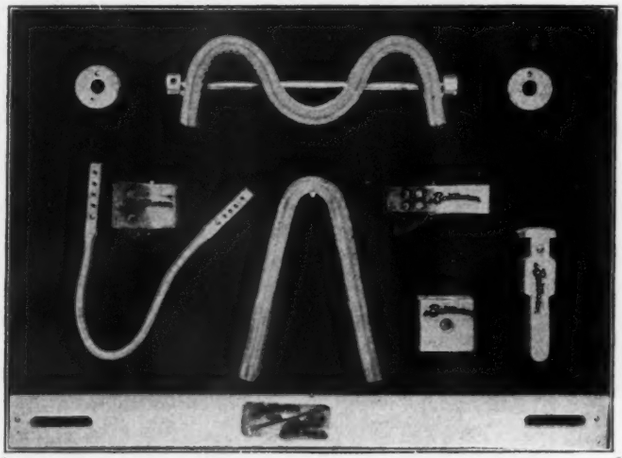
Mr. Cates stated that having the ring rails level will prove a wonderful aid to the rings.

J. H. Clark, overseer of spinning, Borden Manufacturing Company, said that he had found whiting, graphite, and a small brush about the best he had run across to use in the polishing of rings. He said he thought the rings should be polished once a year, and that as light a traveler as possible to use should be used in starting the rings off.

In answer to a question, Mr. Clark stated that he had been able to increase his breaking strength by polishing his rings.

Care and Cleaning of Spinning Rings.

Clarence Cates, Edenton Cotton Mills, Edenton, N. C., spoke on the care and cleaning of the spinning frames. He said, "Care and cleaning are so closely related that one might say that they depend upon one another. The overseer that cares for his frames properly will certainly see to the cleaning of them. A



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frame that is clean does not make good work unless its running gear is adjusted, nor will a frame in alignment make a good yarn unless it is kept clean.

"Under the title of 'Care' we first come to the care of all parts that are subject to wear, some of the most important are enumerated, as follows:

"First: Gears. There can only be one correct way to set a gear. However, the important thing in caring for gears is not the actual setting, but to be sure at all times that the teeth of the gears are adjusted to their proper setting. This can be checked only by frequent inspection.

"Second: Cylinder bearings. These carry the fastest moving parts of the spinning frame, as they are usually pinned to the frame so that they are already in line. The only care required is to see that the frame is aligned and to be sure that they are getting sufficient oil.

"Third: Spindle bolsters. Probably more time and care are given the bolsters than any other part of a frame; there are several things that go wrong with them, and the result of these are shaking spindles. If they are not properly oiled (caused by neglect, oil well of base being stopped up, or as in the case of some mills the use of compressed air as a cleaner), the bobbin not fitting the spindle, or the key that holds it stationary in the base being worn off or shaken loose. A systematic oiling and inspection are the only remedies for these.

"Fourth: Rolls. Top and bottom rolls must be aligned. A system of oiling and cleaning will depend on the amount of dirt and lint that are found in the individual mill, and will vary with the different class of stock in the frames.

"Fifth: Rings. So many things cause undue wear to the rings that we can name only a few of them. They are: High spindle speed, small bobbins and large rings, rings not set properly, frames not in line, ring rails out of level, travelers that do not fit, guide wires not set, traverse too long and guide boards too close to top of bobbin.

The solution to the cleaning and oiling of spinning frames will not be found until a system has been installed whereby the individual spinner knows the exact work required of them at all times or periods during the week, and will thereby eliminate some of the excessive cleaning and oiling at the last of the week. A system of this kind will enable the overseer to arrange his time so that he will have more time to give to the various details of his work.

Turning Spinning Rings.

Mr. Hill asked whether or not it was good practice to turn rings over. E. L. Garner replied that he turned over 22,000 rings eight years ago and that they were all giving excellent service now.

S. L. McCracken said that he turned over 58,000 rings on every other frame one year and 26,000 another year. He said that before putting them back on after turning them over he soaked them good in hot water and a soda compound. He also advocated putting light travelers on worn rings. "These turned-over rings have given us very satisfactory results," Mr. McCracken said. Mr. Brietz said he had turned

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quite a few rings and that he had received very good results from them.

The question of the wear of these turned-over rings was next brought up. Mr. McCracken stated that he had found the life of turned-over rings to be about one-half of the life of new rings.

Ends Down Per 1000 Spindles Per Hour.

Mr. Brietz said that he would like to hear from some present in regard to the number of ends they had down per hour per 1,000 spindles in their spinning room. He said that he had from 65 to 145. Mr. Cates replied that they had more than that, but that they had been carding 135 pounds per day, and that by cutting this 25 per cent had cut their ends down in the spinning room 65 per cent. He here pointed out that it cost less to card extra than it does to have 65 per cent more ends down. He brought out that different classes of cotton had a lot to do with the number of ends down, stating that he had noticed a difference of as high as 25 per cent in the number of ends down when using cotton grown in different sections.

He went ahead to say that he believed that poor ginning due to the gin attempting too large a production, had many evil effects upon carding. This causes us to have to make closer setting and card much slower. He urged that the mills demand better grown and better ginned cotton.

L. V. Andrews, Edna Mills, in giving a report of an ends-down test they had run, said that he had run several five-hour tests on warp and five-hour tests on spinning. He said they had one girl in the spinning room who did nothing but run these tests. His report showed that they had only 28 ends down per 1,000 spindles per hour. Upon reading this, he said that he heard quite a few whispers about the room, and that he had a pretty good idea what they were all about, but that if anyone doubted his statement, he would be glad for them to visit at the mill and he would show them just how he got his figures. He said that if some present would only go back home and get out their report card and start looking for trouble, they would be able to remedy a lot of it, as he had 70 ends down before he tried to remedy his errors in the spinning room.

Mr. Brietz here emphasized the importance of seeing how much unnecessary work the spinners were doing. He said he felt sure that many could go back home and look around a little in the spinning room and find many unnecessary steps the spinners were taking in doing their work. He said, "as pointed out before, these little things certainly count in a mill too."

Mr. Brietz diverted the main topic of the session here for a moment to give a report on the number of broken ends on his warpers. He said that in the beginning he had 30 broken ends for 10 hours of running, running 23,000 yards, but that he had reduced it to 25. Just to be in line with Mr. Brietz, Mr. McCracken also slightly left the issue at this point and told of the advantages of keeping the weaver behind the looms.

E. L. Garner here asked for the life of tapes. One member reported that he used six new tapes for 3,000 spindles during a day and night run.

"Travelers should be changed every two weeks on 26s to 30s yarn, running day and night," was the answer given to a question on changing travelers for these numbers of yarn. This was the final question brought up for discussion. The election of officers was next held.

For his untiring efforts and success as chairman of the Eastern Carolina Division of the Southern Textile Association, Norman B. Hill was re-elected chairman of the organization. C. C. Cates was elected secretary.

Mr. Mullen suggested that a rising vote of thanks be given to the mills of Selma for their hearty cooperation in making the meeting one of the most successful the association had ever had. The meeting was then adjourned.

Boston Meeting.

(*Continued from page* 905.)

in wages, research and advertising as the means of lifting the industry from its depression. He said in part,

"The American textile industry is in a position where it can correct its own conditions. Compare our situation with that of England and you will find that England has exported some 60 per cent of its textile products, while we export only about seven per cent. England's export markets in India, Japan and Russia have been taken away, and English industry cannot control that situation. Our small percentage of export means that we can if we will balance more nearly our supply with demand. We cannot bring about the balance as long as some mills run 130 hours a week; as long as some mills take advantage of the temporary curtailments practiced by their competitors; as long as the condition of sectional differences in hours of work is unrestrained.

"We must narrow the gap between production and demand. A recent report issued by the National Association of Cotton Manufacturers is an amazing corroboration of the urgent need of, not temporary curtailment, but permanent reduction. The report declares that the year 1929 may well go down in history as the year that curtailment did not curtail.

"The industry has adopted a proposal to reduce day running to 55 hours a week and night running to 50 for it has been said that the only way we can get anywhere is by gradual process. Will the plan be carried through? It all depends upon the capacity of our industry to co-operate, and upon our willingness to do it as well as talk about it. I have been told that it is impossible to get co-operation among the many scattered units of the textile industry. If it is impossible for the industry to reach solutions of its problems by voluntary cooperation, then we must get ready for coercive measures from the outside.

"We should take up the trumpet and tell the world about our products; about our achievements and our successes. There are successful companies in the textile industry, but you find very few men in the street familiar with these successes as they have become more familiar with companies in other lines of business. We must, of course, spend money in

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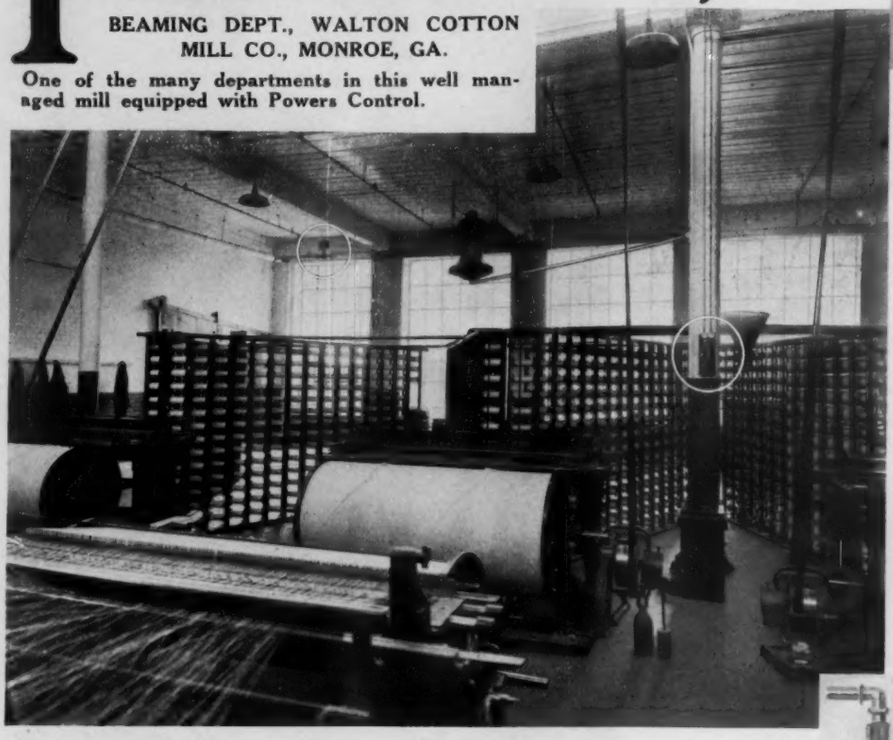

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the newspapers and magazines to tell our story if we would replace with good will the passive indifference and ill will which have dominated the public mind. We have it within our own hands to set our own house in order and it is for the doing of that job that we will deserve public approbation. We have waited long enough. Over-production must be reduced. Mills are selling below cost. And this means that it becomes almost impossible to make the fair profit which any enterprise deserves in return for risks assumed and services rendered."

Pinehurst Meeting.

(*Continued from page* 900.)

time, if aggressively maintained for five or ten years with whole-hearted co-operation on the part of all members, bring about a situation which would mean automatic continuance and progress through all the years."

The Banquet.

The annual banquet on Tuesday evening was an enjoyable and interesting affair. A "witty oratorical wizard," Dr. John L. Davis, entertained the diners with a humorous speech. Prior to this feature, however, Toastmaster Dixon called upon a number of distinguished guests, including Lincoln Baylies, president of the National Association of Cotton Manufacturers, George A. Sloan, president of the Cotton-Textile Institute, S. Robert Glassford, president of the Association of Cotton Textile Merchants of New York, and Fred Rakestraw, of the Cotton Yarn Merchants Association, all of whom spoke briefly and to the point concerning conditions at the present time. B. E. Geer, T. M. Marchant, and J. H. Separk were also introduced. Following the banquet,

The Style Show.

Following the banquet, the association, under the direction of Secretary W. M. McLaurine and Miss Susan Bates, of the Cotton-Textile Institute, staged a cotton style show, in which living models from the store of J. B. Ivey & Company, Charlotte, displayed more than thirty dresses and costumes made from domestic cotton fabrics, and designed largely by Parisian couturiers. The wide diversity and attractiveness of the designs, which included sports costumes and dresses for town, afternoon and formal evening wear, proved somewhat of a surprise even to the manufacturers of the fabrics displayed, which included prints, terry cloths, ginghams, crepes, broadcloths, piques, etc., etc. It is believed that the success of this first show will insure its becoming a more or less regular feature of the Association's meetings.

The concluding session of the meeting, on Wednesday morning, was executive in character. The officers previously named were elected. In addition, F. J. Haywood, of Kannapolis, N. C., was named to the board of governors, due to the elevation of B. B. Gossett to second vice-president. J. H. Cheatham, of Griffin, Ga., A. K. Winget, of Gastonia, N. C., George H. Lanier, West Point, Ga., and S. M. Beattie, of Greenville, S. C., were made members of the board.

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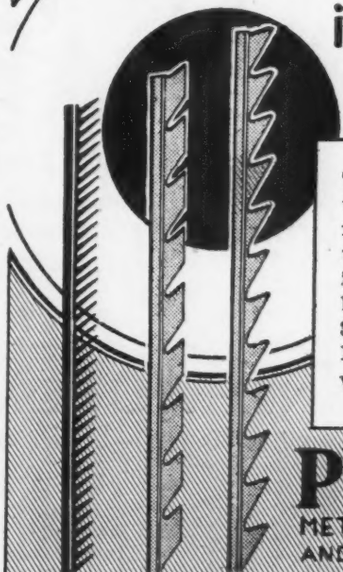

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FOR ALL TEXTILE PURPOSES
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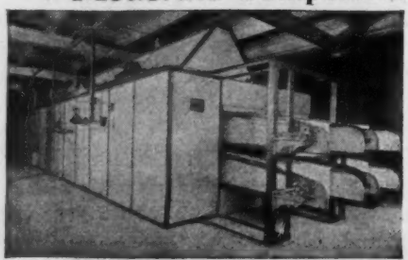
Moderate Temperatures—Uniform Drying—Low Operating Costs

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185

W. D. Anderson, of Macon, Ga., was made a representative on the National Council. Ben E. Geer presented the retiring president's medal to Mr. Dixon. Committee reports from the abitration committee, traffic committee, etc., etc., were presented. This session concluded the convention.

Old Timer.

(*Continued from page* 935.)

of taking a young textile graduate off of a section of looms and making him overseer of carding over a large card room!

All right, my editor knows the man personally, and knows he is today a successful superintendent of a mill in one of the leading organizations of the South, and his salary is not to be sneezed at, either.

I say, my dear reader, do you ever ask yourself the question as stated at the head of this article?

Do you really know yourself?

Why not try to get acquainted with that part of yourself you have not been on speaking terms with?

I say "on speaking terms with" because you have not been asking that question, have you?

Are you capable of being moved up? If your boss quits are you going to be considered for the position?

Are you any better qualified for the place than are the other men in your organization?

Think, brother—*think!*

Federal Farm Board.

(*Continued from page* 909.)

consequent calamity to all the people, the Board stepped in with loans of fixed amounts on wheat and cotton to co-operative marketing associations.

The Board could have organized stabilization corporations, entered the open market and bought and removed at Government expense from immediate available supplies any amount of farm commodities. We chose to go the loan route for a number of reasons, not the least of which was that it put the responsibility for action on farmers themselves.

Some members of Congress, some farmers, and some business men seem to feel that stabilization operations by the Federal Farm Board are not only proper but should be constantly engaged in. The Board believes that they are proper, but it also believes that they are emergency operations only and that they should be undertaken as seldom as possible. The Board further believes and is working toward the goal that eventually the co-operative marketing associations of farmers will be able to control by their own operations in effective merchandising most of the price fluctuations due to recurring surpluses. Always, however, under the Agricultural Marketing Act, the Government stands as a wall behind which the farm organizations need not retreat.

For a time the loan operations of the Federal Farm Board were enough to prevent the industrial panic from seriously affecting commodities. Ultimately, however, American unemployment, restricted buying power, decreased consumption of textiles and bad business conditions in the world at large, forced the Board

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that make a
Big Difference
Tapes are little things but they do the all-important work of driving the spinning and twisting machinery. . . . . and they have a say-so as to the economy and efficiency of the operation.
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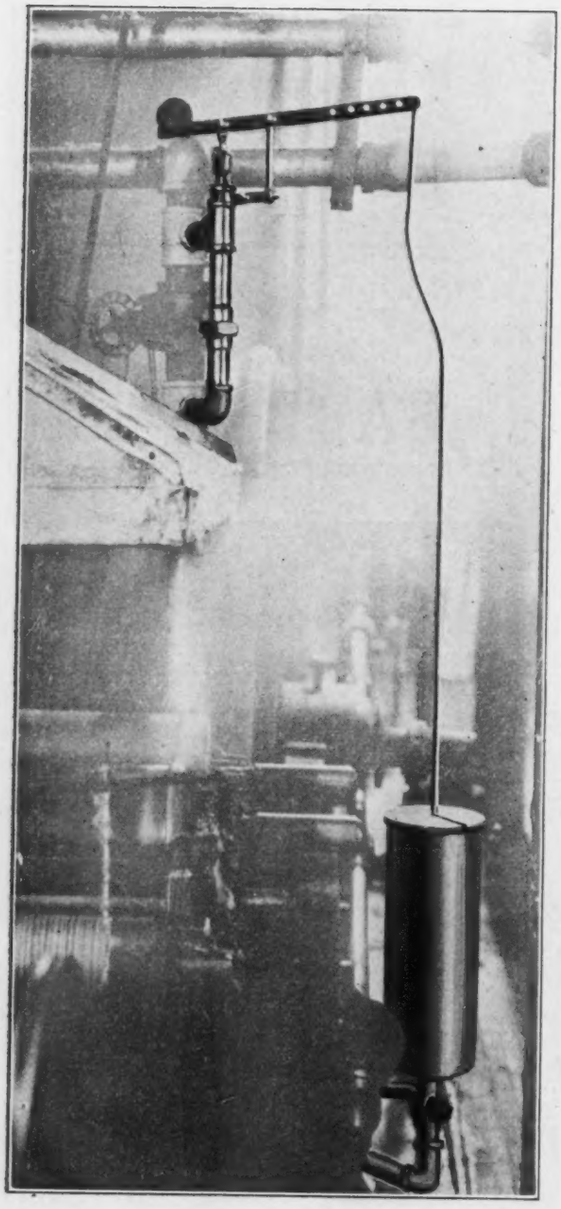
Sanders WINDER BEARING REBRONZING

Keeping Size at Constant Level *in the Cutter Plant at Rock Hill* ♥♥♥



IN step with modern developments, the Cutter Mfg. Co. of Rock Hill, S. C., installed Queen Patented Size Controls on their slashers and finishers with results that will never be regretable.

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IDEAL MACHINE COMPANY
BESSEMER CITY, N. C.

Queen SIZE CONTROL
PATENTED

to step in again, this time with stabilization operations on wheat and, to avoid a crisis in the cotton trade, with support for the cotton co-operatives on their futures hedges and their spot cotton. The effect of these operations cannot yet be properly measured by either friends or critics. Time will tell that story.

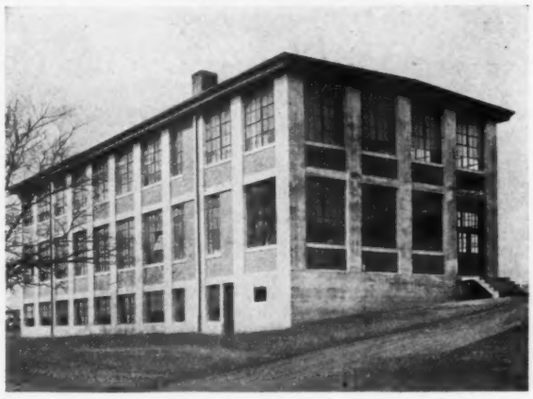
It is not my purpose to discuss here the immediate operations of the cotton co-operatives. It should be emphasized, however, that these co-operatives are now going through a necessary readjustment period, that their present activities are considered by them to be solely for the purpose of self-preservation, that those activities are of an emergency character, and that they are not to be taken under any circumstances as an indication of permanent co-operative policies.

So far as permanent policies are concerned, it is inevitable that the co-operatives shall be cotton merchants, operating on the cotton markets of the world as cotton merchants do and meeting the needs of the mills and the textile trade on a basis of real service. It is inevitable also that, regardless of the permanent success of the cotton co-operative movement, a large part of the American cotton crop will always remain to be handled by private merchants. The fundamental attitude of the co-operatives themselves and of the Federal Farm Board toward these merchants is an essentially friendly one and, in my opinion, following the readjustment period through which the co-operatives are now passing, that friendliness will develop working methods that are pleasing to both.

The job of the Federal Farm Board, however, is infinitely larger than that of attempting to meet emergency situations or even that of encouraging the organization of farmers into strong, self-controlled and self-financed marketing institutions. Under the Agricultural Marketing Act the Federal Farm Board is essentially an agricultural planning board. It must look ahead as best it can. It must keep abreast of production and consumption in all nations. It must pass its information along to the farmers of America so that they may not only intelligently market their crops but, and more important, so that they may produce the qualities and quantities of crops that are demanded by the consumers of the world.

One specific Farm Board project, for instance, is the improvement in the character and staple of American cotton. We recognize the relative deterioration of recent years. We recognize the excess costs of production in some parts of the belt. We know that on the average the man who produces less than one-third of a bale of lint to the acre does so at a loss. We know that the South does not feed itself and that more acres planted to food and feed are essential to financial independence. We recognize no difference between a profit gained by an increased price and a profit gained by a lowered production cost, except that the latter method of gaining a profit is better for the land and causes less labor for the man than the former. We recognize that one of the most serious handicaps to cotton farmers and to the cotton South is the annual fluctuation in the acre income of the cotton farmer. How is it possible for a farmer to be permanently prosperous when the value of lint cotton in

STEWART



A MODERN WELL EQUIPPED PLANT TO SERVE YOU!

Government tests have proved that the climatic conditions of the South make necessary certain changes in general paint formulas—if the paints are to endure.

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The Spartanburg plant is modern in every detail. Stewart Paints are economically produced—yet the quality is unexcelled.

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1920 was but 46 per cent of that in 1919, or when its value in 1922 was 180 per cent of that in 1921, or when the value of lint cotton in 1926 was but 65 per cent of its value in 1925? A widely fluctuating price for cotton has done much economic harm to the cotton South. The need of the cotton farmer is a stable price at a fair level which will return a profit to the efficient farmer.

I venture to suggest that the need for this stable price is just as great on the part of the textile manufacturer as it is on the part of the cotton farmer. It can never be achieved except by farmers themselves with the aid of Government.

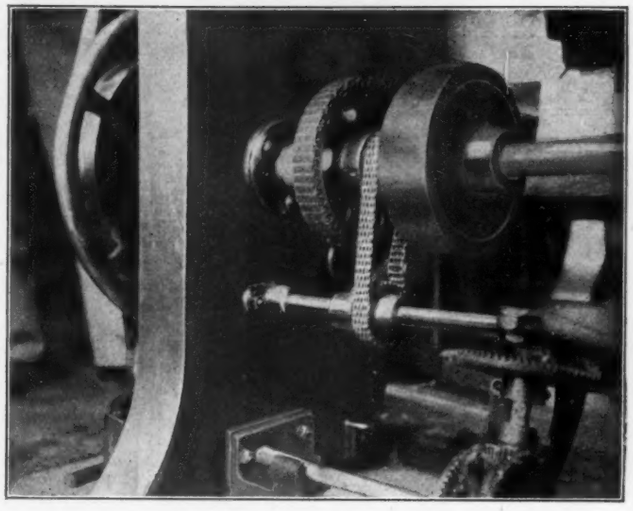
The Farm Board knows that the Agricultural Marketing Act did not repeal the law of supply and demand. Farmers must still merchandise their crop on a basis of what the world is willing to pay for the amount produced. Nevertheless, farmers can iron out some of the peaks and valleys in the price level and get for themselves a more certain and dependable income by collectively having something to say as to the time and place of sale and the quality and quantity offered at that time and place. That is their purpose and it is one of the purposes of the Federal Farm Board.

It is possible that developments of this character, while aiding the farmer to eliminate his own annual gamble on production income, will at the same time aid the spinner to eliminate his annual gamble on his raw material and his consequent gamble on his finished product. It seems to me that there is a very great mutuality of interest between producers and spinners. The farmer knows that the mills are his necessary customers. The mill knows that the farmers are its necessary producers. It has always been hard for the mill man and the farmer to meet on common ground or to understand one another's problems. This thing now becomes easier. Farmers are organized and so are the mills. The leaders of these groups not only may but should constantly confer one with another so that the best interests of both will be served. The Federal Farm Board itself is interested in developing such a program as this to the greatest possible degree.

Alexander Graham Bell said: To be a successful man you must have three good qualities: Observe, compare and remember. A man by the name of Adams was going through the woods in Minnesota carrying a compass, and as he came to a certain place he noticed that the needle was deflected. This was observing. He remembered that an iron rail on the railroad had had the same effect on the compass needle. This was remembering and comparing. This led to the discovery of vast iron deposits which made his fortune.

If overseers and superintendents read COTTON *as they should—that is if they observe, compare, and remember, they will be able to gain information which will benefit them greatly in the operation of their mills.*

I think it was a very smart guy who said "Winners don't knock," *so we will just add to that wise saying that* "Knockers don't win."



Do You Know the *Stewart Compound?*

Do you know that the Stewart Compound for Roving Frames saves at least 10 per cent of the power required to drive the frame—that it reduces the load on the cone belt from 30 to 50 per cent—that it practically eliminates repair and maintenance costs?

Profit by the experience of 150 mills of the South with the Stewart Compound. They are using it successfully as standard equipment—making drastic cuts in power expense.

Write for the two month trial offer. See how the Stewart Compound works under your specific conditions. This places you under no obligations whatsoever. Write for this offer now. Also valuable information.

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STEWART COMPOUND
for **ROVING FRAMES**
with Chain Drives

TEXTILE BOOKLETS *Worth Writing For!*

The booklets or catalogs briefly mentioned below may be obtained by any reader of COTTON who will write to the Company issuing them or to COTTON, Grant Bldg., Atlanta, Ga.

1. Cotton Picking, Carding and Spinning—Covered by three different catalogs. Picking catalog covers Opening and Picking Machinery; Card Room catalog covers Cards, Combers and Roving Frames; Yarn Machinery catalog covers Spinning, Twisting, Spooling, Quilling and Reeling. By Whitin Machine Works, Whitinsville, Mass.

2. Pepperell Equipment—10 page illustrated booklet, showing High Speed Warping from cones as adopted by Pepperell Manufacturing Company after thorough experiments. Installation and product photographs. Issued by Universal Winding Company, Boston, Mass.

4. New Methods of Opening Cotton, also "Brown" Automatic Mixing and Cleaning Distributor—Illustrated booklets showing advantages of Centrif-Air Cotton Cleaning System. Pamphlets also on better picking and carding and pneumatic trunk line cleaner. Issued by Centrif-Air Machine Company, Atlanta, Ga.

5. The Bahnson Master Control—Bulletin No. 301, 5 pages. Illustrated. Automatic device designed to control humidifying equipment so as to maintain a constant relative humidity. By The Bahnson Company, Winston-Salem, N. C.

6. "Cotton" Weather Vein, 32 pages; "Rayon" Weather Vein, 40 pages; house publication, illustrated. Bulletin 58, 80 pages, illustrated; Manufactured Weather—the automatic control of air conditions within buildings. Carrier Engineering Corporation, Newark, N. J.

9. The Johnson Friction Clutch—illustrated brochure and advertising reprints showing clutch installations of interest to textile field.—By Carlyle Johnson Machine Company, Manchester, Conn.

10. Leathers, Textile—Booklet No. 101, 48 pages. Illustrated. Showing BONDARON Check Straps—Lug Straps—Harness Straps—Pickers—Belting, both round and flat, etc. Horsepower tables and other interesting information. By Charles Bond Company, 617 Arch Street, Philadelphia, Pa.

11. Whitinsville Rings—16 page illustrated booklet. Describing ring manufacture, measurements, types, uses. How to determine flange sizes. By Whitinsville, Spinning Ring Co., Whitinsville, Mass.

12. The Pick Method of Weaver Wage Payment—Booklet, 20 pages. A practical manual giving full information and tables on this method of payment. By the Durant Manufacturing Company, Milwaukee, Wis.

13-A. Equipping Modern Textile Plants—Booklet, 35 pages, illustrated. Describes value of Monel Metal equipment in textile plants and presents reports from mill owners and operators on actual experiences; equipment, descriptions, etc. Also Dyed in the Truth—Reprints of advertisements of special interest to textile dyers. International Nickel Company, Inc., 67 Wall Street, New York, N. Y.

14. Emerson Conditioning Ovens—2 booklets on conditioning of textiles, or determination of the amount of moisture in textiles. Issued by Emerson Apparatus Co., Melrose Highlands, Mass.

15. Saving Labor, Material and Power in the Textile Industry—Bulletin No. 133. Illustrated. Controlling, Recording and Indicating Instruments in textile mills. Temperature, Pressure, Humidity, equipment layouts and descriptive applications. The Foxboro Company, Foxboro, Mass.

16. Tycos Instruments for the Textile Industry—Catalog, 84 pages, illustrated. Shows instruments for every application in the textile industry, specifications, prices, diagrams and installation data by Taylor Instrument Companies, Rochester, N. Y.

17. The Powers System of Thermostatic Control—"Slasher Room is Bottle-Neck of Textile Mill." 18 page illustrated booklet showing importance of proper treatment of cloth in slasher room and advantages of Thermostat over hand control. Also room temperature control illustrations. Issued by Powers Regulator Co., 2789 Greenview Ave., Chicago, Ill.

19. Quaker City Chemical Co.—48-page booklet containing useful information, tables, formulae, on dyeing, bleaching and finishing all textiles. Issued by above company, 2736 North Broad St., Philadelphia, Pa.

20. Bleaching, Dyeing, Finishing and Printing Textile Goods—70-page booklet containing interesting information on faults and methods in finishing goods, useful tables and definitions. By Bosson & Lane, Atlantic, Mass.

21. Warp Sizing and Composition of Cotton—Folder containing reprints of articles carried by textile publications of interest to progressive mill superintendents. By Seydel-Woolley Co., 748 Rice St., Atlanta, Ga.

22. Tragasol and Its Uses—Booklet, 60 pages, constituents and properties—Dissolving and preparation—sizing and dressing of yarns—cloth finishing—miscellaneous. By John P. Marston Co., 247 Atlantic Ave., Boston, Mass.

23. Practice of Rayon Sizing in American Mills, Raygomm, Lakoe Gum—Three booklets on products for sizing and finishing rayon and other textiles, presented by Stein Hall & Co., Inc., 285 Madison Ave., New York, N. Y.

24. Wyandotte in the Textile Mill—90-page booklet with information on bleaching, dyeing all textiles, including hosiery.—J. B. Ford Co., Wyandotte, Mich.

26. The Guide Post—18-page booklet showing porcelain guides, rollers, eyes used by textile mills.—By Page-Madden Co., 277 Ralph Ave., Brooklyn, N. Y.

27. The Seven Factors of Belting Economy—Booklet, 112 pages, illustrated, containing authoritative information on the economical layout, care and operation of belt drives. Chas. A. Schieren Company, 83 Ferry Street, New York, N. Y.

28. Constants and Calculations for Textile Mill Men—Memorandum book containing tables of constants and calculations as compiled by a prominent textile executive.—By Fisher Leather Belting Co., Inc., Philadelphia, Pa.

30. Lubrication of Textile Machinery—32 pages, illustrated. Data covering the economical lubrication of all textile machines. New York and New Jersey Lubricant Co., 292 Madison Ave., New York, N. Y.

31. Aluminum Paint—The Cost of Metal Protection—Booklet, 46 pages. Illustrated. The protecting and light reflecting qualities of Aluminum paint; its advantages to textile industry; where it is used; specifications. By Aluminum Company of America, 2400 Oliver Bldg., Pittsburgh, Pa.

32. Flooring, Open Steel, Area Gratings and Steps—Folder, 6 pages. Illustrated. For platforms, walks and stairs; non-slipping. By Kerlow Steel Flooring Company, Jersey City, N. J.

33. Cast Iron Columns—18-page booklet on use of cast iron columns in mill construction. By National Cast Iron Pipe Co., Birmingham, Ala.

35. Seating Equipment—Automatic, adjustable, ten inch height adjustment, all steel, mill and factory seating specialty, illustrated booklet, ten pages. Vitek Manufacturing Company, Omaha, Nebr.

36. Hosiery Inspection, Seamless and Full Fashioned—Illustrated folder. Also describes new Leg Examining Machine for full fashioned ladies' stockings. Edward R. Ammon, Reading, Pa.

38. Sleaziness in Full Fashioned Knitting—Illustrated survey with samples of fabrics showing causes of sleaziness, and methods to be employed in eliminating it.—By Textile Machine Works, Reading, Pa. (This company also issues parts catalog of Reading full fashioned machine with general information on subject of full fashioned knitting.)

39. Trend of Sales of Silk, Rayon and Cotton in the Piece Goods Departments; twenty-four-page booklet; prepared by DuPont Rayon Company in conjunction with National Retail Dry Goods Association. Copy furnished without charge by either of above. DuPont Rayon Co., 2 Park Ave., New York, N. Y

40. The New Competition in Color—30 page illustrated booklet. Discusses future trends in business and their significance, present trend toward fast colors in textile industry and opportunity this trend offers for increased profits if properly utilized. By Franklin Process Co., Providence, R. I.

41. Budget Control—40-page booklet showing how each part of business budget should be prepared and principles of its effective operation together with a summary of benefits.—By Ernst & Ernst, Accountants, 27 Cedar Street, New York, N. Y. (This company also has available booklets on Standard Costs, Business Control Through Analysis, The Better Wage, Factors to Consider in Working Out Mergers).

42. Factoring—Booklet, 11 pages. Summary of Factoring Service provided for Manufacturers of Textiles. By Textile Banking Company, 50 Union Square, New York, N. Y.

44. Points of Interest in and Around Atlanta—36 pages. Illustrated, describing places of scenic and historic interest in Atlanta in particular, and the Southeast in general. Atlanta Biltmore Hotel, West Peachtree, Fifth, Sixth & Cypress Sts., Atlanta, Ga.

Knitting Section

No seam to twist or mar the leg's sheer shapeliness.

The "Gussetoe"... narrowed and formed... the smooth foot... with no seam or ridge.

FASHION steps forth in the newest smart stocking . . . no seam on the graceful leg or small trim ankle . . . no seam under the smooth snug foot or on the narrowed fitted "Gussetoe."

A stocking of exquisite sheer . . . shaped and fitted in the knitting . . . always elastic . . . sleekly smooth. The stocking from the new Model K machine.

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Of course, the Flatlock Seam is positively flat. That fact however is only part of its appeal. It is practical merchandising to underwrite the popularity of your undergarments with the Flatlock—*The Seam that sells the garment.*

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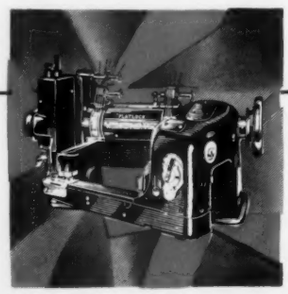


Write our Home Office for samples made on the Flatlock, or submit your own fabrics for sample purposes. Sole United States and Canadian Agents for Cornely and Uniart Embroidery Machines.

Knitting Week *in* Philadelphia
Is Successful Occasion

THE WEEK of May 12th in truth made Philadelphia the mecca of knitting interests. During this period the Quaker City provided several important and valuable attractions, of a varied character.

Most comprehensive and extensive was the 34th Annual Knitting Arts Exhibition, held in Commercial Museum from May 12th to 16th inclusive. This display of knitting machinery, equipment, supplies, yarn and products was unusually elaborate and worth-while. A check-up of the floor space and number of exhibitors definitely makes accurate the statement that it was the biggest yet; never before has there been so commanding and representative an exhibition of equipment and products pertinent to hosiery and underwear manufacture and distribution.

Of equal moment, and closely associated, was the annual convention of the National Association of Hosiery and Underwear Manufacturers, held on Thursday of Show Week. The Association's new policy of confining the meeting to one session, with a luncheon, was continued, and in addition this year a detached convention hall, minus the noise and confusion of previous years, was utilized. John Wyckoff Mettler was re-elected president. He and John M. Botts delivered unusually interesting addresses, which are reproduced in large part in the following report.

The Durene Association held a meeting on Wednesday, May 14th, which was largely of an educational character to acquaint the knitters and others present with the aims, purposes and work of the organization. This meeting is also reported fully below. Meetings of the Hosiery Guild, Inc., and the Full-Fashioned Hosiery Manufacturers of America, were also held during the week.

All in all, it was a busy, enjoyable and profitable week for the knitting factors who attended.

Mettler Discusses Seamless Industry

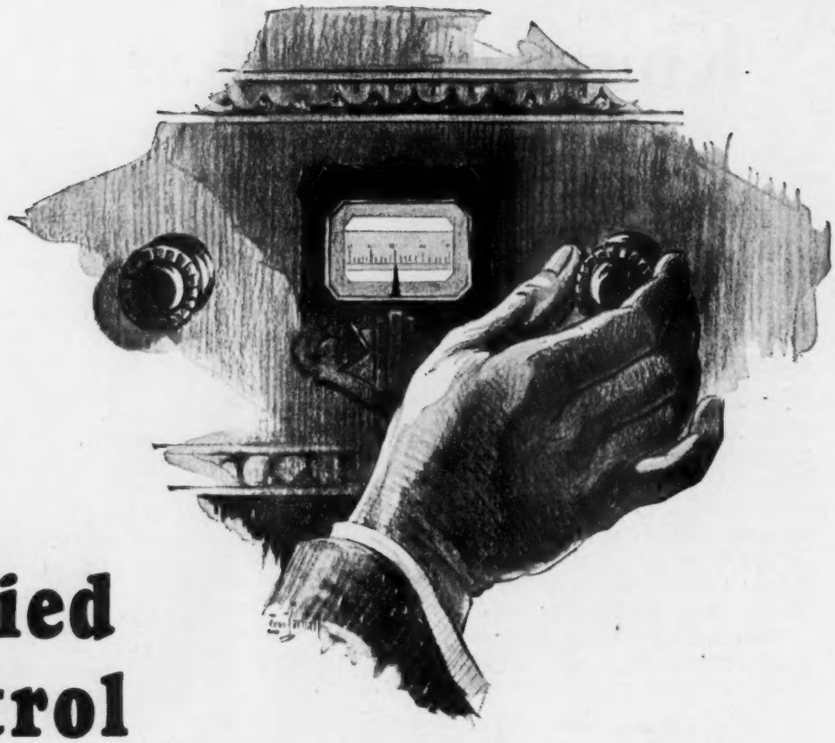
THE ANNUAL CONVENTION of the National Association of Hosiery and Underwear Manufacturers was held on Thursday, May 15th. John Wyckoff Mettler, president of the Interwoven Stocking Co., presided as president of the Association. Following the report of the treasurer, Ernest Blood, Mr. Mettler rendered the annual address of the president, which contained a review of conditions in the industry, and sound advice for the future. It follows in part:

"I cannot report to you that the hosiery industry of the country is in fine shape. Both the full-fashioned and the seamless branches of the industry are in far from satisfactory condition, due principally to overproduction or the failure to balance production against sales. It appears to me that this is the one outstanding problem, compared with which all other difficulties of the industry are insignificant, and I will at once take up discussion of this subject.

"Sound business management demands the maintenance of a steady and constant economic equilibrium for the leveling of the peaks and valleys in business by the control of production for the accomplishment of these ends. During the past few years we have witnessed in this country a most remarkable spectacle of the headlong extension of manufacturing capacity, both in the full-fashioned and seamless branches of the hosiery industry. This has gone far in excess of all possible requirements, and we now face a situation in which excess capacity must be reckoned with as a permanent menace to the industry. We have anticipated the future requirements of the country by upwards of five or ten years by flooding the industry with machinery. A new situation has arisen which will require thorough and careful handling. It will no longer be practical or possible to go on producing and piling up goods in the expectation that demand will continue as nearly balanced with supply as it was in the period immediately following the World War. From present indications, we will never again be free from the menace of overproduction, and it is high time that management took this factor into consideration.

J. W. Mettler, Re-elected President.

"Nothing could be more ridiculous than the piling up of goods in excess of all possible demand during the several months immediately following the financial upset last Fall. Compare the policy of many hosiery manufacturers with that of the great department stores. In other words, stop and consider the methods of those who buy your product, and see how they handled the same situation last Fall. The first thing they did was to abolish reserve stocks and start in at once to operate on less than normal stocks. This prepared them for the slower movement of merchandise, as slower turnover would require



Simplified control

Just as radio manufacturers have simplified the operation of radio apparatus—so has Wildman greatly simplified the operation of the slow motion mechanism in the new Wildman Full-Fashioned Hosiery Machine. It now could be operated by a mere child—no strength is required.

Write for further information.

WILDMAN MFG. CO.

Full-Fashioned Division

Norristown, Pa.

less stock. It also placed them in position to take advantage of the expected further decline in raw materials prices and the consequent decline in merchandise prices. Do these fellows hold any bags? Not if they know it. Why should they? Then, why should we make ourselves the goats and get caught with the goods through failure to act quickly in a situation which called for quick action?

"We are not the only industry which has had to face the problem of excess machine capacity. Most industries have met and solved this problem since the war period. Let me give you one lone example: In a Middle Western State there is today a huge plant which is filled with what is really a single machine—it turns out, completed, automobile frames, almost untouched by the human hand. To supervise this vast automat, about two hundred men are employed. The plant turns out upwards of nine thousand automobile frames per day.

"Now, in contrast to this, a rather well-known plant in Central Europe, also employing two hundred men in the part of its establishment devoted to the same kind of work, turns out thirty-five automobile frames per day. This clearly demonstrates the dangerous possibilities of excess production by unrestrained machine installation or by failure to control production after excess machinery has been installed.

Managing Director McCullaugh.

"In a year such as 1929 most of the industries engaged in the production of necessary articles showed highly satisfactory earnings. The hosiery and underwear industry, however, as a whole, and with very few exceptions, showed little or no gain, and, in many instances, heavy losses, due almost in every case to failure to keep production balanced against sales.

"Too many of the smaller manufacturers, and some of the larger ones, cannot resist the temptation to keep up full production in order to 'keep down costs,' failing to realize that such a policy only brings greater loss at the end of the operation through the sacrifice of forced sale. Such a policy of procrastinating, of failing to cut down production at the proper time, merely puts off the evil day and dams up the trouble to make it all the worse when it comes.

"We know positively of huge overproduction in many plants and of large quantities of goods being sold well below actual cost, and of a number of mills which, as a result of such policy, are either now in liquidation or 'dead on their feet.'

"And the worst feature of the present situation is the unnecessary and preventable extra load of these large surpluses of stocks in depressing the market price, coming on top of a general business depression.

"No sales pressure can overcome the great basic fundamental laws of economics. The time to sell is when people want to buy, and the time to buy is when people have to sell. Dont' continually force yourself into a position where you *have* to sell. Don't put yourself in a position where the other fellow holds 'all the cards,' and then expect to successfully 'play the game.' Of course, sooner or later, this situation will take care of itself, but it will be a case of the 'survival of the fittest,' we hope.

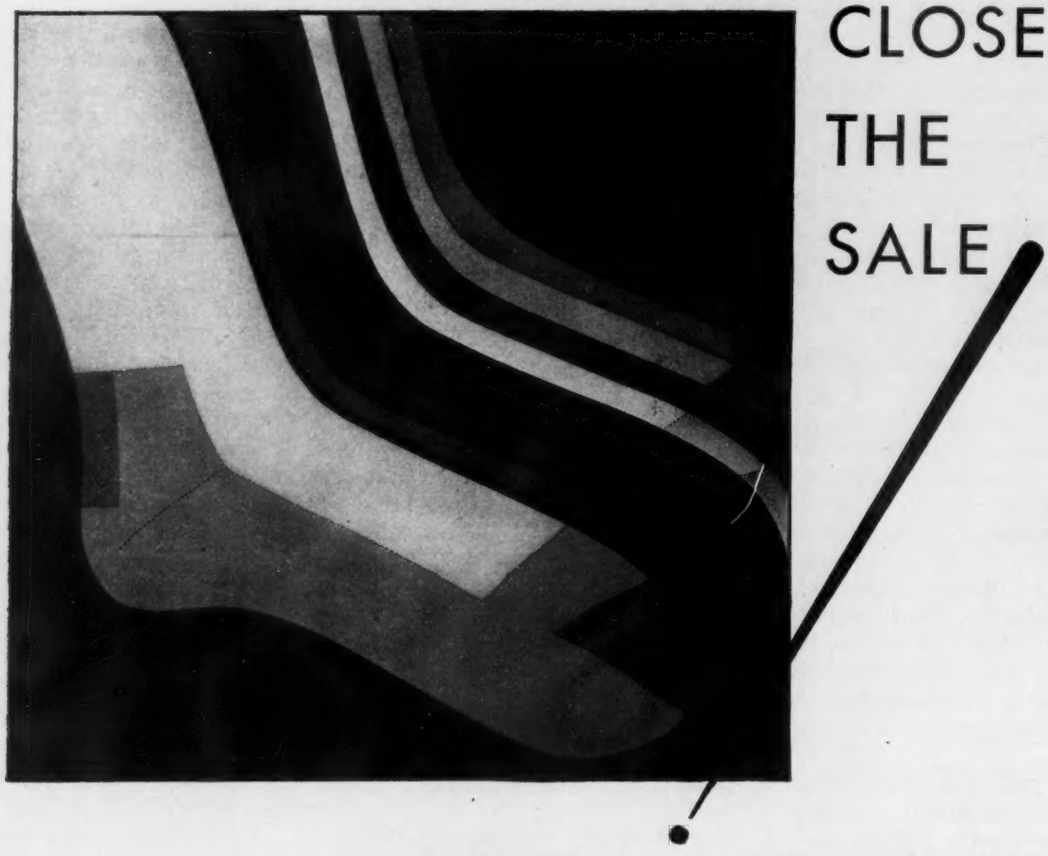
"One thing is sure—the day of shortage of capacity is over for goods in the hosiery industry, and the whole problem has shifted to one of regulation of output and of marketing. None can hope to survive who are not qualified, by proper organization, to cope with the marketing problem. After all is said and done, the actual net worth capacity of any hosiery manufacturing business is measured today by its ability to market its product. That is the real neck of the bottle, and no one sees the picture as it is who fails to get it from this true point of view. Your production must be determined entirely from what you can sell, and you must not make what you cannot sell at a profit. Self-evident and elemental, but it takes backbone to stick to it.

"When the crisis of last Fall came on, we issued a warning to all manufacturers, calling their attention to the importance of watching their inventories of finished goods. We were not trying to tell anyone how to run his own business, but neither were we remaining silent when we felt obligated to speak. A few criticized our 'free advice,' but the vast majority recognized the soundness of our caution (even if they didn't act upon it). Hindsight is always better than foresight. We can all see now that what was said then was exactly correct. It saved many from serious situations, but, unfortunately, there were many who went blindly ahead overproducing, only to find themselves later in the embarrassing situation of having to close down part time just when their more sagacious competitors were all through with their troubles and back close to a normal employment of labor, and many found their funds all tied up in goods produced at higher than present cost of raw materials.

"There is very little difference between being 'all tied up' and 'dead broke.'

"The stocking up of great sections of the country 'on tick' with knitting machinery, much of it for twenty-four-hour operation, without regard for the capacity or limitations of the market, could only end in disaster. During the year 1929, 2,500 new full-fashioned machines were installed in this country, many of them 24-set high-speed machines, and, during the same year, a single seamless machine maker was installing 500 machines a week for new additional production, largely in the South. Many of these mills have gone out of business during the past few months, and most of them realize they are riding for a fall. The manufacturer who just sets out to make goods, without knowing where they are going, simply has the cart before the horse. The man who makes only what

LET THIS EXTRA REINFORCEMENT CLOSE THE SALE



DOUBLE extra splice at points of extra wear . . . The Banner Split foot NARROW EXTRA HIGH SPLICE and TRIPLE TOE attachment adds this extra merchandising feature to any "Split foot hose." And no loose ends nor ragged edge where silk instep joins reinforcement. Write for full information on this exclusive Banner feature. Price of attachment for machines now running gladly sent on request.

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PHILADELPHIA CHATTANOOGA HIGH POINT

THE BANNER AUTOMATIC HOSIERY MACHINES

Looking Down One Aisle at the Knitting Arts Exhibition.

he has definitely marketed is hooked up right for the long pull and is the only one who has a right to expect to survive.

"Any sound business man of ordinary intelligence would consider it unbelievable that any large portion of a great industry could keep on, year after year, making up surplus goods, glutting the market, and then selling them at actual loss, just because these manufacturers keep on kidding themselves with the penny-wise and pound-foolish policy of believing they are lowering their costs by keeping up full capacity output, when they cannot possibly sell their goods at a profit after they make them—simply saving at the spigot while wasting at the bung.

"There is another subject which should be discussed here. There has been a great deal of talk in the past year or so about returns. I refer to the trade abuse of unfair returns of merchandise, the arbitrary 'firing back of goods' without just cause.

"The common causes for returns of merchandise may be classified as follows:

(1) Defective merchandise.
(2) Late shipment of original or back orders.
(3) Errors in filling orders.
(4) Undesirable substitutions of certain items.
(5) Overbuying and an attempt on the part of the buyer to rectify his mistake by returning excess merchandise.
(6) Merchandise found unsuitable, and, therefore, unsaleable.

"Obviously, the first four of these reasons are the fault of the shipper, while the last two are the fault of the buyer. The fact that many outstanding manufacturers never experience any trouble with unfair returns of merchandise leads us to believe that, if your merchandise and your methods are correct and sound, there is no reason or excuse why your customer should make a business of firing back good or why he should expect you to stand for unreasonable treatment of any sort. No one can run your business for you—you must stand up for what plainly constitutes your just right in the light of all fairness—you must give what is properly expected of you, and demand in return what is fairly coming to you. The customer soon learns to know who has to and who does not have to take back anything any old time for any cause or for no cause. If you want your goods and your firm kept off 'the sucker list,' keep enough backbone to qualify as one of those outstanding first-class manufacturers, whose merchandise and methods command the respect of all with whom they come in contact. If you indulge in slipshod methods in some respects, you must expect to be classified as loose and easy-going in all respects.

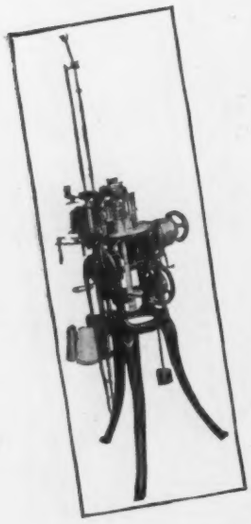
"The buyers all know there are plenty of manufacturers to whom they would never get a second chance to fire back goods without just cause, but they also know that those manufacturers exercise great care to see to it that everything is right, and place themselves in position to take firm but reasonable stand.

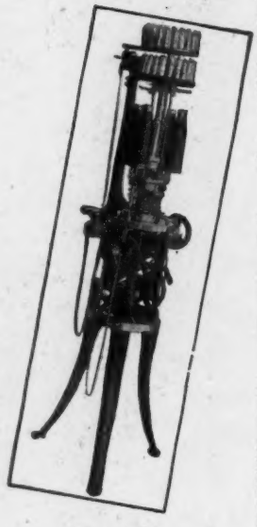
"The foundation of control of the return of merchandise lies in setting and adhering to a *reasonable* time limit, after which the right to return shall lapse. All claims must be completed and any returns must be made within a *definite* number of days after receipt of goods.

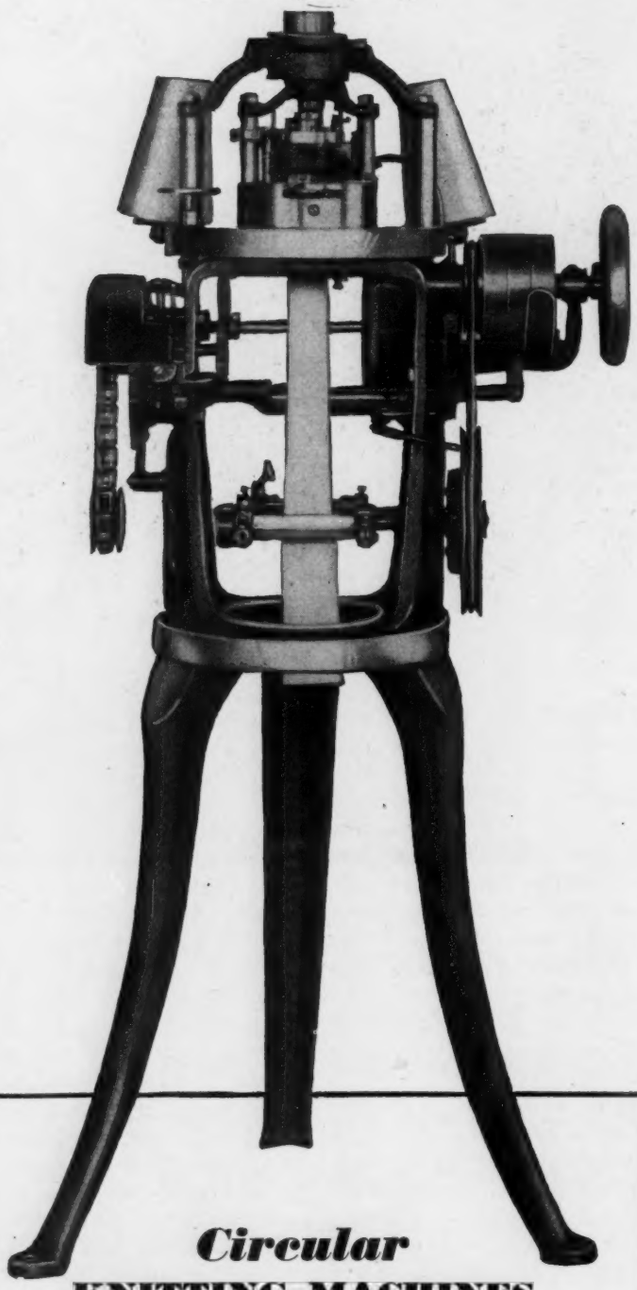
"Perhaps the most important development of recent years in the men's wear field is the awakening of style consciousness. The development of good taste in dress, a reasonable sense of color harmony, an appreciation of 'hand' and texture, as well as a regard for

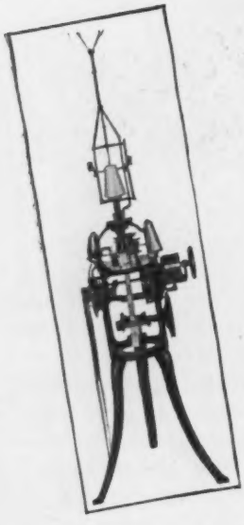
ALL TRUE-RIB

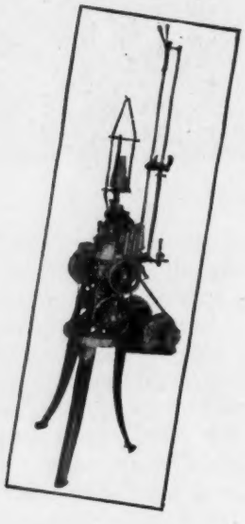
(Patented or patent pending)

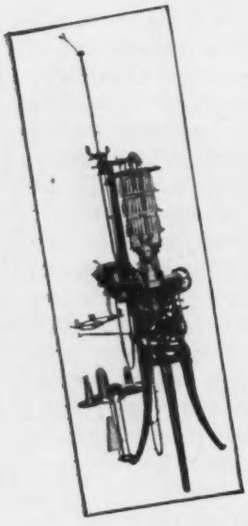


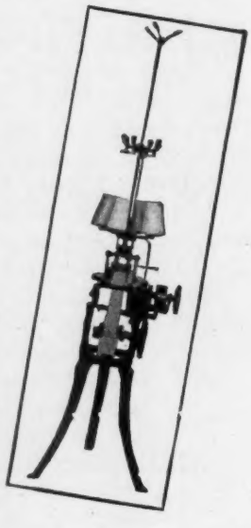












Circular

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pattern and design, all follow in the trail of the awakening of style consciousness, and must now be taken into full consideration as a controlling factor in *giving the consumer what they want.*

"There is an old saying that a 'woman is no older than she looks, and a man is not old until he stops looking.' It is equally true that 'few men are as old as they look, and few women as young.' The women have long since found the answer to this problem—appropriateness in dress. The men are only just getting alive to it.

"Perhaps the most important development of the day in the industry is the tendency toward co-operation. The problems of an industry cannot be solved by any single remedy. The very existence of the present unfavorable factor is encouraging a much greater degree of sound thinking and sound merchandising and a far greater sympathy for the principle of co-operation. This is the time for all branches of the industry to get together, as never before, under the one strong central organization, your National Association.

"While unsolved major problems will continue to harass the members of this organization in all its branches during the coming year, we have never before seen these problems take such definite form, or come under such universal recognition, or be subjected to such intelligent consideration as the present time. Certainly there is a new spirit of co-operative thinking clearly developing, which holds real promise for the future of industry.

"The long and trying decline in the price of raw materials is certainly at or nearing the turning-point. The overproduction of the recent past is rapidly coming under definite control, many plants have already brought their inventories back to normal, and the end of unprofitable expansion of plant capacity may be expected to follow.

"Modern merchandising methods are rapidly taking the place of inadequate marketing facilities. Co-operation—born of necessity—is coming into general acceptance, and the elimination of many losing propositions will go a long way toward cleaning up the troubles of industry.

"Personally, I believe the worst is over, and the expected revival of normal conditions sometime during the Fall of the year, if not before, will be a welcome change. Out of the fog and the worries of the present day will come many helpful reforms and better business.

"Surely the hosiery and underwear industry cannot be criticized for the alertness and lack of originality. Certainly great ingenuity has been used in the machinery development, in designing and in styling. Accomplishment in this respect is far above the average of the textile industry."

Following Mr. Mettler's speech, the convention was addressed by R. C. Kramer, associate director of Amos Parrish & Co., fashion and merchandising consultants and advisors. Mr. Kramer was scheduled to discuss "Fashion on a Business Basis," but devoted practically all of his time to transmitting to the manufacturers of knit goods the viewpoint of the retailers, for whom his concern acts as advisors. He declared that, like it or not, the hand-to-mouth policy is the proper one for the retailer to follow. He urged a more definite sales and price policy on the part of manufacturers, declaring this to be the wish of the retailer, who, he said, does not like to resort to special sales to dispose of merchandise.

The Future of Full-Fashioned

John M. Botts, secretary of the Fidelity Knitting Mills, of Philadelphia, and partner of Harrington & Waring, New York City, provided the highlight of the convention in his address with reference to the full-fashioned hosiery industry. He had been scheduled to speak on "The Future of the Full-Fashioned Business," but, in an epigrammatic and pungent style, broadened the scope of his talk to include a large number of pertinent subjects regarding the business. His address is reproduced in large part herewith. While the reading of it will not carry the force of Mr. Botts' inimitable style and manner of delivery, it will be found interesting and entertaining. He began:

"I have been honored with a request by your managing director, Mr. McCullaugh, to address you on the future of the full-fashioned hosiery business, its present situation, its causes and remedies. The suggested points to be touched upon were divided into three subjects—manufacturing, selling, and the future—and these in turn sub-divided as follows: Unintelligent production. Necessity of controlled output. Stock control—what is normal stock? Desirability of smoothing out production peaks and valleys. Alertness to style developments. Quality—honest construction. Better management. Salesmen versus order-takers. Pressure for cheaper goods 'to meet a price' by selling organizations. Styling, the function of the selling organization. New outlets. Trading up. The future—what is in store for the industry. Gauges. Standard constructions. The dull luster stocking. The wholesaler's place in the sun. And in case these eighteen subdivisions did not cover the proposition, there were six et ceteras appended.

"Here is material for a professional professor of business who has never conducted any business to write three volumes of six chapters each that would occupy your time for three weeks, so I appreciate the compliment implied in the twenty minutes time allowed.

'The manufacturers and merchants of Babylon and Nineveh were no doubt discussing these problems five thousand years ago. They never were nor will be settled—they constitute the essence of God's greatest gift to man—work.

"1. *Unintelligent production* is not necessarily entirely the fault of the manufacturer. The distributor has his finger in the pie. He owes a duty to merchandise created, the handling of which is his source of wealth. At irregular intervals, our physical system gets out of order and needs re-adjustment; dieting and physicing, though unpleasant, must be taken to save the patient. Our commercial endeavors and economic order are human emanations and partake of our human elements. When the process of eliminating the poison from the economic body came to a head last Fall, the wholesale and retail distributors promptly took an extreme position. 'Don't buy,' became the cry,

instead of practicing reasonable and salutary conservatism in buying.

"Human nature cannot reason in panic—just cut, slash and slaughter. From what should be a moderate lay-off and reasonable re-adjustment, we degenerated into the condition that naturally follows cut prices, cut profits, cut wages and cut hours of employment, that breaks the heart of the decent manufacturer, who is proud of his plant and of his good relations with his work people.

"His stock piles up—he cannot eat his goods. His credit melts away—his help have not enough wages from part time to pay for rent and food—and little or nothing to spend in front of the retail merchant's counter for the things he needs and wants. The retailer, like the rest of us, gets what he buys—cheap prices—cheap goods—cheap customers. What price cheapness? I ask.

"Yes, gentlemen, unintelligent production may be caused in part by unintelligent distribution, and I cast no aspersion on the distributors. They were ably assisted by about the worst exhibition of mill selling that I have ever seen—and as most of the mills have their own personally controlled selling force, they may take that chicken home to roost.

"Don't cry about the situation—just recognize it! We act in the same natural way in buying our raw materials. It's everybody for himself and the devil take the hindermost!

"2. *Necessity of controlled output*—This necessity is ever-present and is taken care of by the simple law of supply and demand, and will continue to be so controlled unless Uncle Sam repeals the Sherman Act, which I think would be a very bad thing to do, because we would make our own law and that would be worse. In making this statement I know that I cannot be accused of trying to please my audience. Present control is O. K. When there is too much we will stop making and when there is not enough we will buy more machinery. Just now we are not buying machinery.

"3. *Stock control*—What is normal stock?—That is always governed by conditions of the period. During and right after the war none at all was needed by the manufacturer—while at the present time approximately six weeks production on hand in the rough permits a manufacturer to make the spot deliveries required by the trade.

"4. *Desirability of smoothing out production peaks and valleys.*—This is of course always desirable. The most practical method at the present time is to put the peaks and valleys down on a piece of paper, either with pen or pencil, lay them on a flat top table and smooth them out with the hands.

"5. *Alertness to style developments.*—Don't wait for the trade to ask for something that you are not making. When you are all set and running smoothly and big on your favorite item, you should know that the trade is going to want something else mighty quick. Think it up and have it ready in reserve, and when the orders on your pet item begin to stick and the price to slip, get out from under and hand out the new line.

"6. *Quality—honest construction.*—Why even a poor manufacturer will make goods the best he knows how, if the trade will let him—but they won't, they even get well enough posted on the art of manufacturing to show him how to make them poorer, so he continues to get poorer.

"7. *Better management.*—My observation is that continued improvement in management has been caused by the hard experience of the last year and it can hardly be better than at present and will continue so until good times again make us careless. At present almost any hosiery manufacturer could find a nickel if you dropped one down the smoke stack.

"8. *Selling.*—This is a serious subject as it is easy enough to make the goods—the trouble is to sell them. The one genuine simon-pure salesman of the age is now residing at Doorn, Holland, but when he started the war in 1914, the rocking chair salesmen fell in soft, and while of course none of us divided our commissions or fat salaries with him, we might at least give him credit and appreciation.

"Salesmen are just like the goods, cheap ones cost little to buy but much to keep. At present writing, even the good ones can hardly be called order takers. I would be proud to-day of being called an order taker.

"Owing to the scarcity of the real article, some merchants and manufacturers who merchandise their own products drafted the advertising man to assist the salesman do a salesman's work, possibly having in mind the elimination of that undesirable element or at least the utilization of the office-boy-and-express-package variety. Owing to his unfamiliarity with the product the ad-man discovered hidden virtues in the most ordinary detail.

"Running his untutored eye over a silk stocking with an ordinary plated foot, he makes the grand discovery that it is lined with lisle thread, and the vociferous reiteration of that bit of ancient history is supposed to convey to Mrs. Jones—Brown—Smith the idea an old thing with a new name is a novelty. Of course, Mrs. Jones—Brown—Smith pays extra for the information.

"9. *Pressure for cheaper goods* to 'meet a price' by selling organizations.—Unfortunately, there is such pressure and much of it—but it is reflected and subdued by the selling organizations in the manner of the shock absorber under your car, because when the manufacturer himself is subjected to this selling pressure by the buyer direct he flattens out like the proverbial pancake and after the steam roller has run over him his elevation is that of a hole in the ground.

"10. *Styling* is truly the function of the selling organization, as the maker is farthest away from the source of information as to what is desirable, with a natural disinclination to make the machinery adjustments and changes to bring out new items. On the other hand, the selling organization is nearer the source—sees no beauty in any slow seller and is constantly on the qui vive for a quick seller.

"Here, however, is where the question of what is a selling organization comes in. I remember seeing in small towns one lone Italian personify an orchestra—the drum stick tied to his elbow, a string to his heel clanking the cymbals and tirangle, his head rattling the bells and a bagpipe under his arm, and while I

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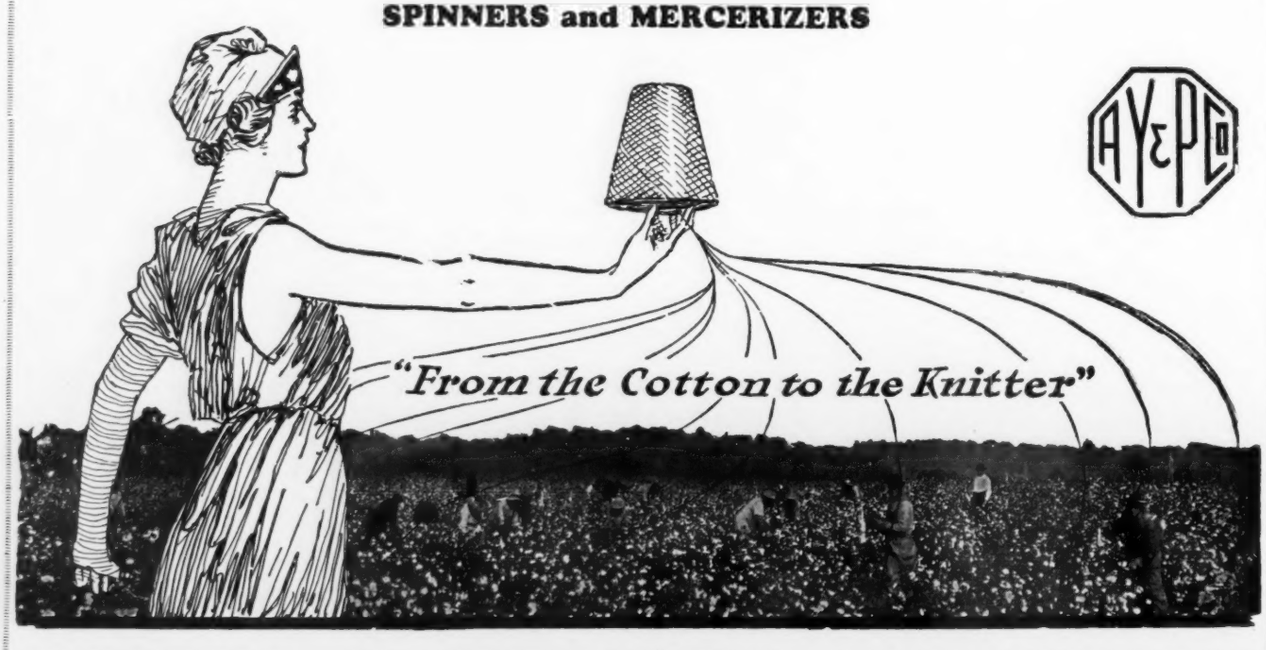
SPINNERS and MERCERIZERS



would say he was highly organized, I would hardly call him an organization, unless we include the monkey running around with the tin cup.

"11. *New outlets* depend on the growth of intelligence in distribution, which is a simple little subject involving banking and financial systems, world economic conditions, international trade relations, tariffs and a few etceteras. Two facts stand out—every woman in the world wants a pair of full-fashioned silk stockings, and we have the productive skill and power to make them for her, so I remain hopeful that my grandchildren will have problems to solve when they arrive. In the meantime, what we want in this country is high wages and continued increase of buying capacity on the part of the workers.

"12. *Trading up* is a polite fiction for trying to get a little profit all along the line, which is conspired in agreeably by all elements in the trade, until the visible supply of the new item gets large enough to be seen, when nature takes its course and it becomes trading down instanter.

"13. *The future of the full-fashioned hosiery industry* is in my judgment as thoroughly secure as any human endeavor that I can bring to mind, for it is synonymous with silk, beauty and style, and it is as inconceivable to me that women will abandon this queen of fabrics as that they will return to red flannel petticoats. Though they wear skirts as long as Broadway, they will buy full-fashioned silk stockings as long as they can beg, borrow or steal the money, and as for skirts, I beg leave to repeat a phrase I coined several years ago that 'short skirts did not make full-fashioned silk hose salable, but full-fashioned silk hose made short skirts wearable.'

"As for bare legs or anything like them, they make me laugh. Any Hottentot lady in South Africa will kiss you three ways for a pair of any old kind of stockings to cover hers with.

"Just two things threaten full fashioned silk stockings and I don't tremble at either—one is the utter impoverishment of the American buying public, and the other an act of God changing the present beautiful shape of women's legs from much above and little below to pipe stems of no shape at all.

"14. The *weights* required in the future will continue the trend toward lightness to a reasonable limitation of strength and wearing qualities, the wearer, of course, ever striving to possess the fine. Periods of trade depression that may momentarily affect this demand come and go but we continue on the up grade.

"*Gauges* in the future, as in the past, come finer and finer, each step claiming in its day to be the maximum, only to find that that the next day added skill permits another step forward. It is less than ten years since we sold our first chiffons (don't laugh) five thread, 39 gauge, at $20 per dozen and in very large quantities shortly after at $18.50, $16.50, $12.50 and so on down.

"*Standard constructions* continue to be something of a joke to the initiated but the amateur's mouth is full of specifications. The growth of the full fashioned hosiery business has been so sudden and so large and so easy has it been to sell, that principals have been able to get along nicely without real buyers and salesmen.

"But the cream is off the bottle. The time is at hand when both buyers and salesmen will need to know something more than parrot-like prattle about specifications.

"There is much buying and selling of dimensions instead of merchandise. I can make a 30-inch, four thread, picot edge, 45 gauge, all silk stocking for $11.00, and a 30-inch, 4 thread, 45 gauge, all silk stocking for $12.50 and make more profit on the $11.00 than on the $12.50 article.

"As to the *dull luster stocking*, there are two ways to get the natural luster out of silk. One is to kill it with chemicals which costs nothing except to the wearing qualities of the article, and the other is to twist it off in the throwing, which is expensive. One is ugly and cheap—the other beautiful and costly. All higher twists add beauty, strength, and value.

"It is immaterial to us as manufacturers whether we make organzine, grenadine or crepe twists, but because crepe twisting or crinkling the silk not only lends a real beauty of subdued tone effect but really adds strength, wearing quality and resistance to runs, they will probably have a style vogue for many years as their high cost will keep them out of the real cheap class.

"Confusion in the minds of men in the trade is natural, but every woman knows what crepe cloth is, and that is the desired effect, providing the twisting is not overdone so as to leave no life to the color tone, which should maintain a richness and not utter flatness. You cannot sell a woman a grenadine cloth garment when she wants a crepe cloth garment, and the same applies to hosiery. I never heard of a grenadine crepe cloth.

"*The wholesalers' place* will be in the future as in the past just whatever he makes it himself, and nobody else can make it for him. Quite a few existed in the past who expected the manufacturer to make a place in the sun for him and have passed out of business. If they know what happened after they passed out they know that the manufacturer took the place in the sun for himself.

"That does not mean that all of said manufacturers are happy and I opine that quite a few are finding the sun pretty hot and wish they were back in the shade watching the wholesaler work for them. It is possible that the turn of events in the future may demonstrate as they did in the past that making goods is one trade and distributing goods is another trade and that no man can do two things better than he can do one, particularly in such a diversified, complicated and competitive line as hosiery.

"Believing that turn about is fair play, some of the wholesalers buy themselves a nice mill and pay themselves more for like goods than they can buy them for from people that don't know anything but how to make them.

"A lot of the new wholesalers in the game have not yet learned, and some of the old ones have forgotten, the elemental proposition that you cannot profitably buy your competitor's product unless he is being sold out under the auctioneer's hammer. Maybe I am wrong, but I think that they will either have to

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FULL FASHIONED HOSIERY MACHINES

"ONCE a user, always a user" would be a very apt slogan for Schubert & Salzer Machines. Once a manufacturer of full fashioned hosiery has found out from actual experience the outstanding advantages of these machines, it would be difficult to wean him away from lifetime use.

These advantages are summarized in greater production, higher quality of fabric, and low operating cost. A demonstration will be gladly arranged.

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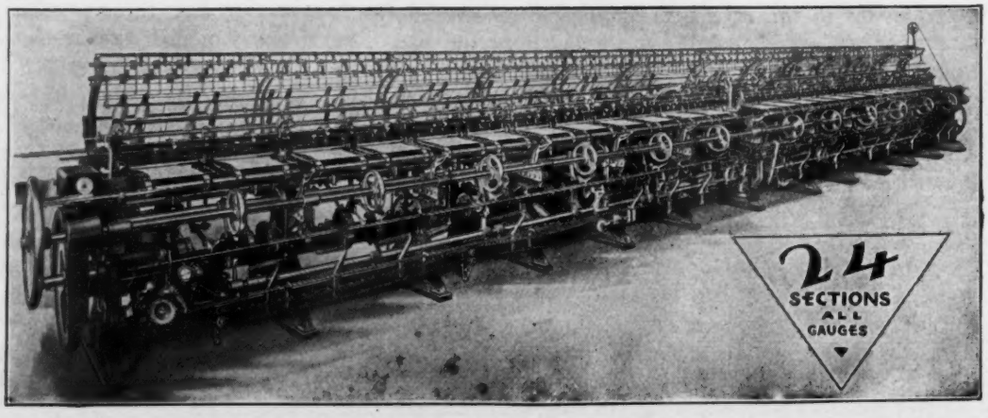


remember it or ultimately fade out of the picture as considerable factors.

"In any event, and talking as a manufacturer, I should worry, because in the last analysis the manufacturer has the machines and the people have the feet and if the distributors, both wholesale and retail, whose province it is to get goods from the maker to the wearer, with a living profit to all concerned, including the manufacturer, don't function, then either one or both will have to make way.

"One big manufacturer now has 11,000 salesmen selling from door to door and the very retailers who wanted to murder him two years ago are buying his goods.

"There is a large number of fine, strong, specialty wholesale distributors of hosiery in general many of them specializing in full-fashioned hosiery, who are strong enough financially to survive and clever enough to learn to overcome any difficulties or problems that may arise, and the fine old line wholesale distributors scattered from coast to coast who are functioning well and can, like the rest of us, learn to do better, are of such number, financial strength and ability as to make ridiculous the statement that the wholesaler is going out.

Left, J. P. Holt, chairman advisory committee, and, right, E. L. Starr, director-treasurer, Durene Association.

"Manufacturers of full-fashioned hosiery have imported from Europe more than forty per cent of the new full fashioned machinery set up in the past year. They think that is perfectly all right, but if forty per cent of the hosiery used in this country was imported, there would be a riot in the halls of Congress.

"Protection is a successful and selfish policy that should apply to the productive machinery as well as the goods. Those machines should be made here to the benefit of American workers and general business. Machinery prices should and could be kept in proper range by competition of additional machine manufacturers."

Mr. Botts' talk concluded the one-session convention, with the exception of the election of officers. Over-ruling an expressed desire on his part to retire, the Association unanimously re-elected John Wyckoff Mettler as president. Other officers named were: George F. Dickson, Minneapolis, re-elected first vice-president; William Meyer, president, Apex Hosiery Co., Philadelphia, elected second vice-president, succeeding John B. Lesher. Joseph Haines, Jr., president, Haines Hosiery Co., Philadelphia; W. H. May, president, May Hosiery Mills, Burlington, N. C.; and John H. Brine, president, Rollins Hosiery Mills, Des Moines, Iowa, were added to the board of directors.

The meeting of the Association was concluded with a luncheon served at 1 o'clock on Thursday, with no speeches, the entertainment being furnished by an orchestra, and the Interwoven Pair, Billy Jones and Ernie Hare, famed radio songsters, in person.

Durene Association Holds An Educational Meeting

ON WEDNESDAY, May 14th, a special meeting was held by the Durene Association of America, as previously indicated. John Nash McCullaugh, managing director of the hosiery and underwear association, opened the meeting with an introductory talk. E. L. Starr, director-treasurer of the durene organization, presided. The chief speaker was J. P. Holt, general manager of the Aberfoyle Mfg. Co., and chairman of the organization's advertising committee. Mr. Holt urged a greater expression of the modern spirit of co-operation between this trade association's nation-wide work and the knitters of durene merchandise who will ultimately be major profit-takers in the results of its "sales-promoting, friendship-promoting, and educationally clarifying activities."

Mr. Holt pointed out that the knitters of hosiery and underwear are chief consumers of durene at the present time. As a result the Durene Association's unified advertising, promotional and educational work is directly beneficial to all knitters who are interested in building a greater market, and more widespread appreciation for their merchandise rather than in "engaging in the now antique sales scheme of merely swapping customers."

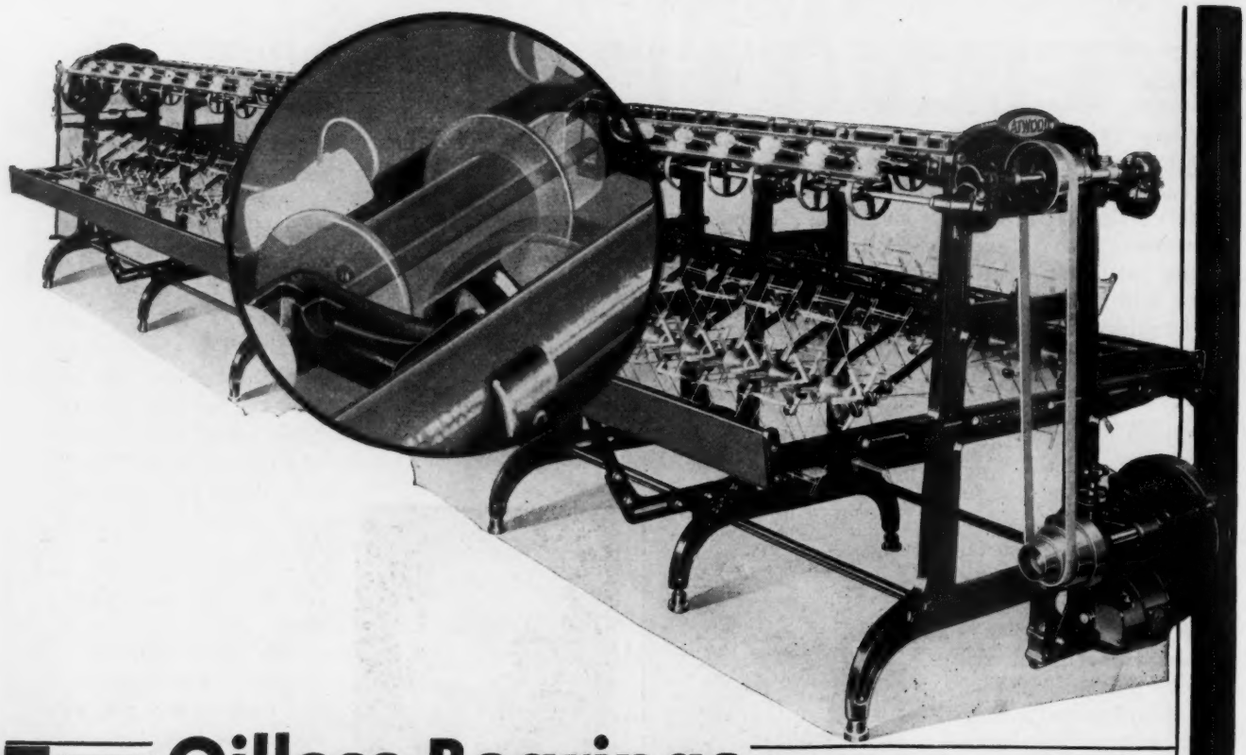
Alert users of durene are already stepping forward to join hands in the unified progress of this industry, the speaker said. He pointed out that the name durene is thus being made "a readable asset, a talkable asset, a saleable asset for the manufacturer and a most usable asset for the ultimate consumer."

Mr. Holt particularly emphasized the importance of a unified terminology for the output of an allied industrial movement. The name durene, he pointed out, being usable only by members of the Durene Association—those who have agreed to maintenance of a high quality standard of production—is a term which "we can stand behind fearlessly whereas older terms for poor, medium and quality mercerization can not hold such prestige."

"If this industry were incapable of standing pridefully behind its output," said Mr. Holt, "we had far better keep still. No one discovers the truth about a product so quickly as those who have been led to use it through appealing advertising and promotion. These are the best possible ways to kill a poor product."

Mr. Holt also reviewed the present uses of durene by knitters and pointed to potential uses, and ways and means in which manufacturers may "ride with the Durene Association to greater and more widespread sales and retailer and consumer confidence."

Speaking of the underlying purposes and plans of



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the Durene Association, E. L. Starr, director-treasurer, said:

"The primary objective of the new work is to obtain general and thorough recognition of high grade mercerized cotton yarns as durene, and through such recognition to stabilize the present and future merchandising status of quality mercerized cotton."

Mr. Starr explained that the situation to be thus corrected by the association's activities is a present lack of conscious acceptance, of good will and popular demand for durene yarns as durene. Oversight in carrying through wholesale and merchandising channels this name, which is the symbol of quality and standard production of 85 per cent of the mercerizers in America, has been due only to ignorance and lack of foresight. There has been no desire to avoid use of this clarifying term.

"Wholesalers and retailers are not slow to see," continued Mr. Starr, "the advantages of fine, quality mercerized cotton being known not merely as cotton, lisle or other inadequate descriptive terms, when prestige and standard quality may be defined by durene labeling and stamping. Such clarification is to the benefit of all factors involved, and will inevitably lead to better understanding and appreciation on the part of the ultimate consumer. Because of our work consumers are already becoming more adequately aware of the additional merit and desirability of durene merchandise, duly labeled, or advertised as such. They will become increasingly dependable, receptive and repeat-buyers of mercerized cotton.

"Our work, thus, is being directed toward the understanding and promotion for and with the consumers and various trade factors who are accustomed to thinking of the term cotton as applied largely to inexpensive types of merchandise from cheese cloth to towels. They have in the past haphazardly grouped all mercerization without regard to quality, appearance and durability.

"By trading up in durene we do not mean to aspire to the peak of luxury as has been necessary in removing stigma from some other yarns which vary so greatly in quality. Durene is always durene, uniform in qualtiy, the finest available mercerized yarns, made of the finest available cotton, and never deviating from this firmly fixed standard of excellence. This compares gratifyingly with certain other textile promotion problems in which industry is confronted by a public taught to expect uniform quality which really is unobtainable because of the constant competitive lowering of yarn production standards, and of the standard of resultant merchandise."

Miss Kathryn I. Day, fashion counsel of the Durene Association, told the knitters present that they have been slow to take advantages which the Durene Association is placing at their disposal, and which the increasing importance of cottons has brought about. The main reason for this is, she said, that "many knitters today are faced with manufacturing handicaps and styling problems which they are not equipped to meet."

"Some of you," said Miss Day, "have old fashioned machinery which you feel you cannot afford to replace with equipment which will diversify your output. In these days of specialization, it is often possible for a textile machine expert to make an analysis which will bring to light ways to cut labor and operating costs to such an extent that sound economy will accompany the buying of new machinery."

Miss Day said she believed it was generally agreed today that proper and timely styling of merchandise is no longer optional with manufacturers.

"Our American manufacturers can make durene hosiery which will be equal if not superior in quality to any imported hose. I hope that some of our knitters will have the courage to prove this statement. Don't worry about not stamping your merchandise 'Made in France.' or 'Made in Germany.' Stamp them 'Durene, Made in U. S. A.' and the Durene Association will do the rest in making this mark of distinguishing quality."

Importance was placed by the Durene Association stylist on the durene mesh knit for underwear which is a development of the past year. The development of similar types of underwear, are better styling in general are only in their infancy, she said.

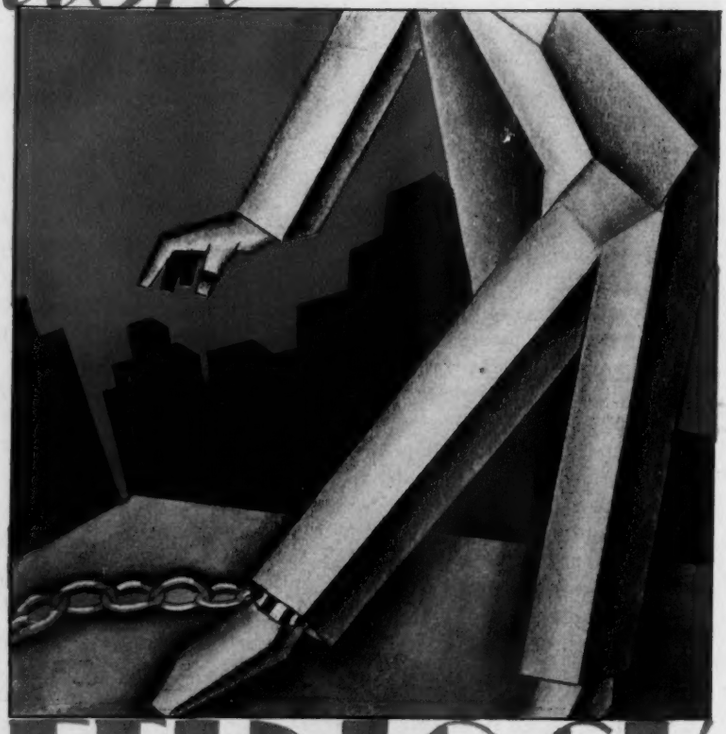
"Many of you have told me that you would like to see cotton come back strongly. But what are you doing about it? The Durene Association is ready to help you create new fabrics; to help you with your styling problems; with your merchandising problems, and in the promotion of your output. This, it seems to me, is an invitation worth taking seriously."

Knitting Arts Exhibition Largest Yet; Many New and Improved Machines and Methods Shown

THE ANNUAL KNITTING ARTS EXHIBITION, held at the Commercial Museum, in Philadelphia, from May 12th to 16th inclusive, was in itself an impressive display, and served as the nucleus for all knitting activity during the week. The Show, under the able direction of Chester I. Campbell and staff as usual, hung up a new record for itself in the number and character of exhibits. There was no gainsaying the fact that more space was occupied at this year's exhibition than was ever used before, or that there was the largest number of individual exhibitors on record. The attendance, while not so large as had been anticipated by many exhibitors, was nevertheless an interested attendance and an unusually large percentage of the visitors represented worthwhile attendance from the standpoint of exhibitors.

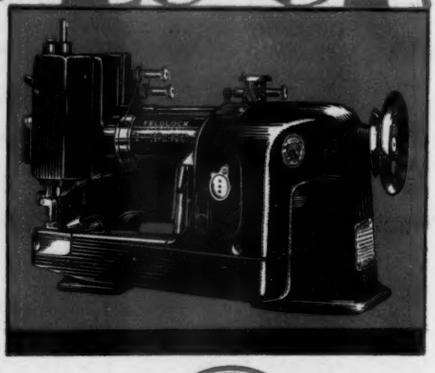
Those who did attend were in no wise disappointed, for the scope and variety found in the exhibition was unparalleled. The whole train of materials, from full-fashioned and circular machines in operation, to the latest developments in needles, were represented, embracing chemicals and dyestuffs, dyeing and finishing equipment, etc. No effort will be made to give detailed descriptions, but from time to time descriptions of some of the important developments will be given in subsequent issues. The show was all in all a splendid occasion.

handicap competition by using the FELDLOCK



YOUR competitors are making every effort to increase sales. Operations are being speeded up all along the line. You can put a handicap on competition by increasing the efficiency of your production . . . with the Feldlock.

The Feldlock increases the volume of production by a wide margin. It is "The machine that makes production." For the Feldlock feeds *off* the arm. And produces the highest quality of lapped fell seaming. It is very important at this time to reduce seaming costs. The Feldlock has proven over and over again that it is able to do so. May we send you the Feldlock booklet, containing the facts?



Write our Home Office for samples made on the Feldlock, or submit your own fabrics for sample purposes.

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"The better needle for the better machine—genuine W & G Needles."

"The Machine that Makes Production"

Causes of Loading Up in Narrowing on Full Fashioned Machines.

Baxter gives some practical suggestions which will be found of value in correcting this difficulty. Refer this to your knitter.

EDITOR COTTON:

I have noted the inquiry of "D. C. (N. C.)", who stated that he is having difficulty on full-fashioned machines with loading up on the first narrowing. He stated that he has tried adjusting the knocking-over, and needles, and has raised the narrowing up and lowered it, etc., and still has this difficulty. He wishes some suggestions as to how to overcome this trouble, which is called loading up in the narrowings in the top of the leg after the welt.

I have carefully examined the sample the contributor submitted to show the exact trouble, and in my opinion, the loading up is not on the narrowing course but the course after the narrowing has been completed. My opinion is that the trouble is caused by the take-up roller not being adjusted properly. As every full-fashioned knitter knows, it is always necessary to carry more weight from the beginning of the welt to the first narrowing in the leg, otherwise the stockings will load up, or, in other words, certain courses will not knock over and make a clear stitch. When narrowing the take-up roller is pushed forward by a cam, lever and tooth gear, on the take-up roller shaft. The purpose of loosening the tension on the take-up roller while narrowing is for the purpose of not having the stitches pull too tight when they are on the narrowing fingers, otherwise they will break out and make a cut or hole in the fabric. The cam setting for pushing this roller forward should be such that the roller is released to its normal position as soon as the narrowing operation is finished, otherwise the stitches will load up.

I would, therefore, suggest to anyone having this trouble that he check up on the take-up roller and see if this is not the cause of his trouble. Another thing that will cause loading up in the narrowings in the top of a stocking is using straps that are not elastic. I find that a lot of trouble of this kind can be avoided by using a strap containing rubber to make it elastic instead of a strap that does not stretch. If the contributor does not use elastic strapping, I would suggest that he try this and it may result in getting away from this trouble.

The only other thing I know that will sometimes cause loading up in the narrowings is that the narrowing machine is either too straight up and down or forward too far or back too far. I would suggest that the narrowing machine be gauged with narrowing machine gauges to see if the narrowing machine is setting properly.

I feel sure that one of the various suggestions offered will stop this trouble, and as an added suggestion, I might say that the knitter should be sure that enough weights are carried while making the narrowings in the top, as sometimes the loading up is caused because the knitter is not carrying enough weight to allow the roller to pull the stitches during the knocking-over operation.

C. H. BAXTER.

We invite our readers to make use of this department for the discussion of any and all problems arising in connection with the knitting mill from the office to the packing and shipping departments. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. All questions will be answered as promptly as possible. The names and addresses of the contributors must be given, but will be held in confidence and a pen name substituted when printed. All accepted contributions other than questions will be paid for after publication. The editors do not hold themselves responsible for any statements of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

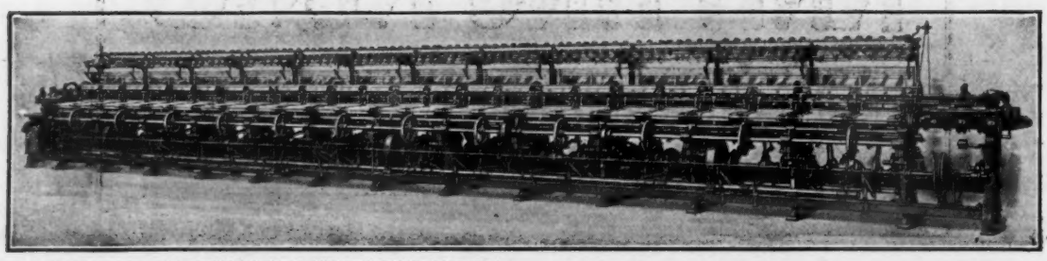
Sleaziness—and Preparing Silk for Knitting.

Another man's ideas in answer to some questions on these important subjects. You are invited to submit your opinions.

EDITOR COTTON:

In the March issue of "KNITTING KINKS" I noticed some questions from "CONTRIBUTOR NO. 4696," pertaining to full-fashioned hosiery manufacture. This man said that he buys his silk on aluminum cones, open wound, which do not require backwinding; that the silk is soaked for ten minutes and is then ready for knitting. He wanted some opinions as to whether a glycerine solution would be harmful in soaking this silk, using one quart of bleached glycerine to 50 gallons of water. He also asked for any alternate suggestions.

I would advise this contributor to try soaking his silk in a solution of one and a half pounds of cas-



Practically any full-fashioned knitting machine will make money for its owners in a seller's market . . . In a buyer's market production must be more precise, more economical and up-to-the-minute in style . . . That is why the majority of successful stocking manufacturers have selected—

The "READING"
Full-Fashioned Knitting Machine

TEXTILE MACHINE WORKS, READING, PENNSYLVANIA

tile soft soap, and one barrel of hot water. My experience is that glycerine will make silk very soft, and there will be quite a deposit of gum on the needles; and in the end there will be quite a bit of trouble. The best method would be to run the silk through the solution mentioned, by using a trough.

This man also asked as to the cause of sleaziness on the knitting machine, and in connection with preventing sleaziness I have the following suggestions to offer:

Be sure that the wedge plate has no nicks in it, due to the sinkers striking it and making an uneven stitch. Make certain that all sections are knitted even in length. Check up on the take-off roll strap. If they are spring rolls, make certain that they are adjusted evenly.

I would make the stocking knit a little looser in the middle of the sinker heads, because those sinkers are used the hardest. That will help to make more of an even stitch in the stocking, and the take off will be more even.

This will take some of the looseness along the sides out. The sinkers that are not in the narrowings, due to not being used all of the time, will make a longer loop.

CONTRIBUTOR NO. 4732.

Preventing Holes in Welt on Ribbed Half-Hose Tops.

An inquiry and an answer on this problem, which will be of especial interest to makers of this class of product.

A SUBSCRIBER recently submitted a problem with regard to damaged tops on thin half-hose tubular welt ribbed tops. The defects consisted of a small hole on the inside of the welt itself. The inquirer wished information as to how this defect might be prevented.

The problem was submitted to a man experienced on these machines, and his reply was as follows:

"The manufacture of men's half-hose tubular welt ribbed top requires a carefully adjusted knitting machine to eliminate a damaged top consisting of a small hole in the inside of the welt itself. The tops being knit in a string, the presence of this type of damage does not present itself except when the tops are separated. This small hole appears at the point where the regular cylinder and dial rib knitting is changed to make the welt by knitting the cylinder and dial needles separately.

"Since the normal action of the dial needles is to draw the amount of stitch that is allotted by the cylinder needles, the change to cause these dial needles to render their own stitch creates an entirely different knitting condition. It is necessary that the stitch of the dial needles under this new condition be of sufficient length to prevent breaking: This amount is exceedingly greater than that drawn by the dial needles when knitting in conjunction with the cylinder needles and the dial stitch cam must therefore be automatically moved to its new position.

TO THOSE WHO THINK THAT ALL FELTS ARE ALIKE

If there is a full fashion knitter who thinks that "felt is felt" regardless of make, he should consult an Aetna Felt user. He would learn from him that Aetna brand is different —that it imparts sufficient moisture to the silk or rayon yarn with as little tension as possible. This eliminates excessive wear on the thin steel tubes in the yarn carriers. He would also learn that the uniformity, and adequacy of moistening with Aetna Felts means a continuously even stitch.

Give the sinkers and dividers on your machines a chance to do their work properly. Specify Aetna Felts.

THE AETNA LINE INCLUDES
Strips, Wicks, Washers, Cone Covers, Bobbin Felts, Quiller Washers, Friction Washers, Race Plate Felts, Pressure Roll Felts, Rubbing Machine Washers, Roller Cloth, Endless Felts, Clearer Cloth, Slasher Cloth, Lapping Cloth, Extractor Cloth, Steaming Blanket.

Special Cloths of all kinds to your specifications.

AETNA FELT CO.
200 CENTRE ST.
NEW YORK
The House of Mechanical Fabrics for the Textile Trade

Aetna FELTS

"An arrangement is provided on the machine to re-position the dial stitch cam and the fabric made on the dial needles should resemble that made on the cylinder needles. The usual mistake made by the knitters is not to have a sufficiently loose stitch on the dial fabric of the tubular welt. Of equal importance to this adjustment is the condition of the outside edge and sinkers of the dial. Should this be rough at the position the change takes place, a damage is inevitable; also, should the dial or dial caps be loose on the center stem and move eccentrically with the cylinder, it would be impossible to expect perfect tops."

Further discussion of this difficulty from other readers with experience will be welcomed. A sample of the defect will be sent to those interested for examination.—THE EDITOR.

A Method of Straightening Needles.

This is an answer to a question recently published. Other readers with experience are invited to answer it also.

EDITOR COTTON:

Some months ago you published in the "KNITTING KINKS" department a question from "CONTRIBUTOR No. 4641" who asked for methods of straightening needles on full-fashioned work. I am glad in this letter to outline my opinion and experience in this connection.

I would advise this contributor to start a needle straightening method by finger pliering before putting the needles in the bar, allowing no needles to be straightened in the machine at all, because this has a tendency to create needle lines, and also marks in the narrowings of the stockings, especially if the needles are bent back from welt turning, they show in the leg narrowings of the stockings.

The accompanying form, "Needle Defects for Inspection," will give an idea of the parts of a needle which must be looked after. This inspection should apply on needles straightened by knitters, and it is only to determine what the knitters are putting in the machine. After the foreman looks over the needles, he returns them to the operator and explains the defects to the operator and shows him how to correct them. By doing this, a mill will get away from a lot of needle lines and mending troubles. I would insist on getting at least ten needles a week from the operators. This gives them a chance to have some straightened needles on hand, instead of having machines standing to straighten them.

This man, "CONTRIBUTOR No. 4641," asked also for figures as to the average consumption of needles on various gauge machines. I cannot give all of the causes of needle breakage, as these depend to a great extent upon local conditions. Some may be in the machine without its being erected properly. Dirty yarn, careless operators for legging machines, bad topping, droppings of bars in footing machines, etc., are other causes. I might say, however, that the heavier the yarn the more the needle breakage will be.

CONTRIBUTOR No. 4721.

NEEDLE DEFECTS FOR INSPECTION		
BACK	BACK AND SIDE	BACK AND BUTT
BACK AND BEARD	BACK, SIDE AND BUTT	BACK, BUTT AND BEARD
SIDE	SIDE AND BEARD	SIDE, BUTT AND BEARD
BUTT	BUTT AND BEARD	BEARD
WHOLE NEEDLE		

Keeping the Cylinder Down.

Some practical suggestions on a practical question, which will interest circular machine operators.

EDITOR COTTON:

I notice the question from "CONTRIBUTOR No. 4620" with regard to keeping the cylinders down on Model K machines equipped with the stitch graduating attachment, which, as he explains, is to gradually tighten the stitch from the boot to the ankle. This man said, "our trouble is with our cylinders not dropping down to the proper level at each graduating kick. This causes our lengths to vary considerably. In order to overcome this trouble we have done several things that have helped, but it seems there must be another method that would prove more practical. The set-screw on the cylinder tube arm which is just above the sinker ring cap is set down as closely as possible without having the top stick when making the reciprocating motion. We have a large screen door spring fastened to the cylinder tube to also pull down the cylinder. The insides of our cylinders are kept lubricated, so that there would not be any possible chance of their getting dry."

After all of these things yhich he has mentioned there are only two other things that I might suggest. One of them is that he take a look at the gear ring spline (6675) seeing that the screws are tight and that the heads are not rubbing the cylinders, and second, he might see whether there is too much friction on the needles, as some fixers have a tendency to put entirely too much friction on the needles.

CONTRIBUTOR No. 4739.

All Dressed Up

Your merchandise—all dressed up —and with plenty of places to go.

Into shoes that pinch and scrape—into washings that are rubbed, stretched and twisted—into sunshine that fades and bleaches.

Then how slick and fresh does it look?

There is a way you can insure against rapid deterioration. Yes—use Dixie Durene and Dixie yarns.

Why not try this "insurance" on your next order?

Durene
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DIXIE MERCERIZING COMPANY

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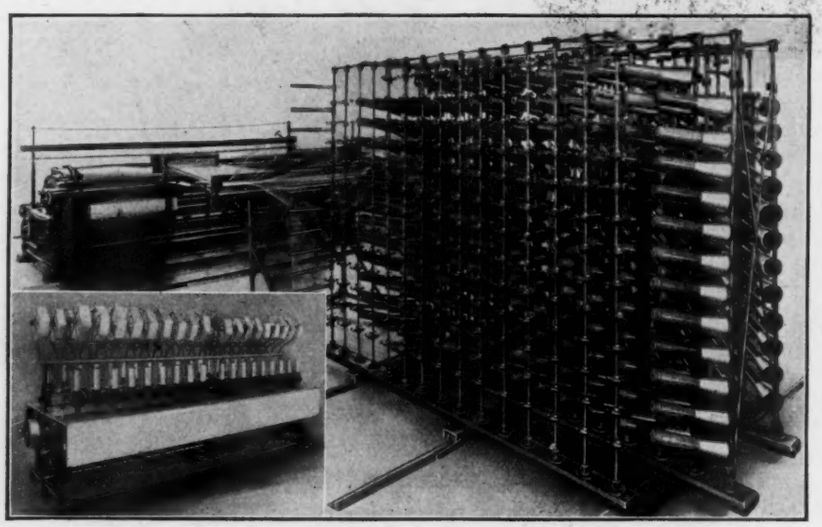
STEP UP YOUR PROFITS
BY LOWERING MANUFACTURING COSTS



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There are more yards per minute and each strand of yarn is evenly tensioned, thus insuring against uneven warps that cause loss of time and imperfect cloth.

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Near No. Phila. Station

Magnetized Knitting Needles.

Some interesting observations upon a problem which seemed unusual, and which you might run up against one of these days.

EDITOR COTTON:

In the May issue of "KNITTING KINKS," "CONTRIBUTOR NO. 4741" submitted a very interesting problem, with reference to magnetized needles on plain Scott & Williams underwear knitting machines. He reported that he was having trouble with the latches sticking to the back side of the guides, and that upon examination of the needles he found them to be magnetized, especially at the latch. As you know, I was interested by this question, and asked you to secure some of these needles for me, which you did, and I have examined them, and there is no question about their being magnetized.

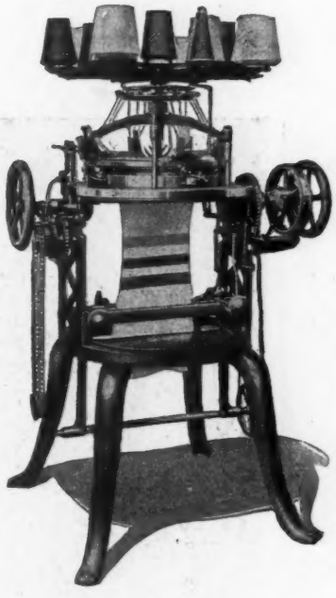
When I first saw the question, the only explanation I could offer of such magnetism was that it was coming from static electricity thrown off from belts, and I felt that this was remotely possible and should affect needles in machines only near the main driving belt. I also concluded that it was possible where knitting rooms are excessively dry for electricity to develop in either cotton, silk or rayon, although I had never seen this extend far enough to affect the latches on the needles.

After examining the sample needles in this case, it was interesting to note the localized condition of the magnetism, which seemed to be almost entirely in the hook and latch of the needle, with no evidence at all of magnetism in the butts. It so happened that while I had these needles, I had the opportunity of checking up on this with a man who is considered a real authority on needles and knitting machinery. He said the localized condition was probably due to the fact that higher carbon steel was employed in the rivet and latch than was used in the main body of the needle. He thought the most logical cause of the magnetized condition of the needle was due to the fact that some cam or working part of the machine coming in contact with the needles had been finished on a magnetized chuck. He explained to me that it is a common practice to use magnetized chucks in the finishing of cams for underwear and sweater machines, and that such cams are always passed through a de-magnetizing operation after they have been finished, but occasionally cams get out without being de-magnetized and always produce trouble. Where such trouble is serious, it is necessary to remove the needles from the machine and put them through the same process of de-magnetizing as is employed in de-magnetizing the cams.

This man doubted the possibility of the needles becoming magnetized through static electricity. To the contrary, however, I think that where static electricity is found in sufficient evidence to be outstandingly noticeable, that it might magnetize needles reasonably within the area of the object producing static electricity.

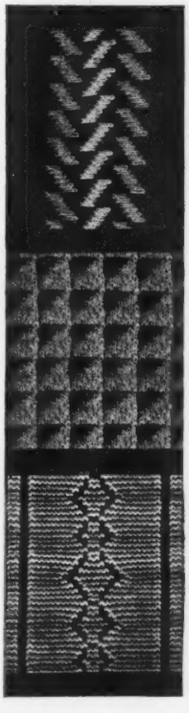
I would be very pleased to see further discussion on this subject in the columns of your "KNITTING KINKS" department. CONTRIBUTOR NO. 4760.

CIRCULAR BRINTON KNITTING MACHINES



Rib and Sinker Top Machines for Plain and Fancy effects.

OUTERWEAR MANUFACTURERS



assure the success of your merchandise by making them on Brinton's. They will perform up to your expectations if Brinton's knit them.

Brinton Knitting Machines are the biggest backing that you can give your sales force — the biggest help to your jobbers and retailers — the biggest value to the ultimate consumer.

Let us send you full information of our line

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FAST COLOR IDENTITY IS NOW THE MASTER SALESMAN

THIS LABEL *on Your Samples Makes Selling Easier*

COTTON GOODS
Here's the Buyer's Guide to Identified Fast Color Lines
Ask for This Label
FRANKLIN PROCESS
THE COLORED YARNS IN THIS FABRIC ARE FRANKLIN PROCESS DYED
FASTNESS TO WASHING AND LIGHT GUARANTEED UNEXCELLED

Every month we tell 96,248 readers that ★ goods identified in this way contain the ★ fastest of fast colors.

WHEN you use this Label on your fast color lines, you tie-in with an advertising campaign reaching 100,000 readers throughout the trade, from mill to converter, to cutter, to wholesaler, and retailer.

Liberal space in *Daily News Record* (note illustration at the left), *Dry Goods Economist*, *Retailing*, *Men's Wear* and *Chicago Apparel Gazette* has created a widespread acceptance of the Franklin Process Fast Color Label—with a notable demand for the Franklin Process Color Directory showing buyers where to secure these colors and how to identify them.

When you use the Franklin Process Fast Color Label you give the retailer and wholesaler a basis for re-ordering your merchandise with positive assurance of color quality.

When you identify your colors you have an immediate advantage over competing merchandise not so identified.

Furthermore, the Franklin Process Label will be supplied for use on the goods as well as the sample.

In this way, 36 lines (8 different types of merchandise) are now being identified as to color to retail salespeople and to consumers. The tremendous demand for fast colors makes this Label a powerful factor in building a continuous demand.

Fast Color Identification is today the Master Salesman—in the market, in the hands of traveling salesmen, and across the retail counter. Use the Franklin Process Label on the goods as well as on the sample. It sells your color values.

Full particulars of this Fast Color Identification Plan and how 36 manufacturers use it successfully will be sent you free on request. Address, using the coupon.

This advertising appears in these magazines that reach your markets:

Daily News Record	12,885
Retailing	32,117
Dry Goods Economist	17,110
National Dry Goods Reptr.	15,453
Men's Wear Magazine	7,594
Chicago Apparel Gazette	6,989
Pacific Coast Merchant	4,100
Total Circulation	96,248

FRANKLIN PROCESS

Identified Fast Colors

PLANTS

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SOUTHERN FRANKLIN PROCESS CO. Greenville, S. C.
CENTRAL FRANKLIN PROCESS CO. Chattanooga, Tenn.
FRANKLIN RAYON CORP., Providence, R. I.—South Boston, Mass.
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FRANKLIN PROCESS COMPANY:
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Please give us full particulars of the Franklin Process Fast Color Identification Plan as applied to

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(Give type of goods)

*Name*_____
*Title*_____
*Firm*_____
*Address*_____ Ad. 347

EDITOR COTTON:

With reference to the question on magnetized needles on latch needle knitting machines, brought up by "CONTRIBUTOR NO. 4741," I might say that the only experience I have ever had with magnetized needles was on a lot of new needles. We took the matter up with the factory and they explained that they had placed long butt needles on a magnetized bed plate of an emery stand to hold them in position while they ground off the butts, converting long butt needles into short butts. These needles were so highly charged that the latches would throw off large groups of stitches.

There was nothing we could do to correct the trouble, so the factory took the needles up and replaced them with other needles.

So far as producing this trouble on the knitting machine on account of friction is concerned, I have never had this to happen. If the latch and cheek side becomes worn and roughened by the movement of the latch, the indication is that the latch is not getting the proper lubrication. If the needle is being subjected to hard service due to the character of the fabric being knitted, I would recommend one application a day of an oil containing some vegetable or animal fat, of the semi-fluid lubricant type. If this type of oil is used exclusively on the latches, they will have a tendency to gum up, so I think it is advisable to also oil once each day with a light stainless mineral oil. The compound oil can be used exclusively on the needle butts and stitch cams.

I have seen needles become electrified by a leaking wire from electric stop motions, and it is possible that the trouble may be coming from a leaking motor or transformer not properly grounded. In this case it is an electrical problem for an electrical engineer.

I know no remedy for the needles affected, and my suggestion would be to replace all such needles with new needles and store the magnetized needles and they will probably lose their magnetism by ageing.

CONTRIBUTOR NO. 4750.

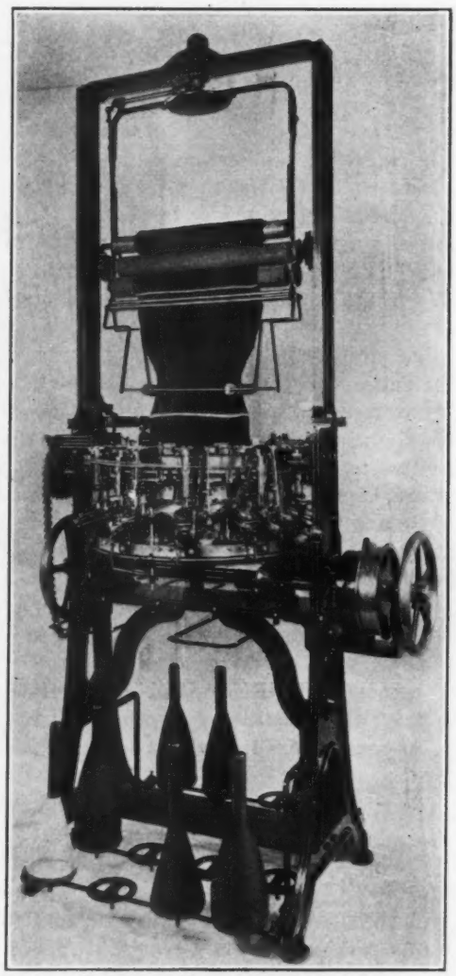
EDITOR COTTON:

I have read with much interest the question of "CONTRIBUTOR NO. 4741" with reference to magnetized latch needles on his circular machine. He states that he is having trouble with latches sticking to the back side of the guides on his Scott & Williams plain knitting machines, and that upon examining his needles he finds them to be magnetized, especially at the latch. He further states that these latches, during the knitting process, are drawn up to and tend to stick to the guide because of this magnetic attraction. He said that all of the needles are not magnetized, and those which are do not carry the same charge.

Before discussing this problem further, I would like to quote here a paragraph from a circular on "Useful Needle Information," published by the Torrington Company. The paragraph in question refers to magnetism of needles, and reads as follows:

"*Magnetism.* Occasionally complaints are received

NEW!



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Manufacturers of Swimming Suits and Outerwear Should Write for Bulletin on this Remarkable Machine.

CHARLES COOPER CO., Inc.

BENNINGTON, VERMONT, U. S. A.

of magnetized latches, this being more generally noted in the cold months of the year. Real magnetizing of latches is almost unknown. The oil which is used as a rust preventative coating on all needles shipped does, however, give the appearance of magnetism on latches in the finer gauge needles. This is due to the capillary attraction of the oil used and can be eliminated almost invariably by washing in gasoline."

The writer has noted at various times, but very seldom, this magnetism caused by the rust preventative oil, but, frankly, has never had any difficulty in the knitting process in using them. The inquirer's statement that he believes his trouble is due to heating of the needles, caused by friction of the parts, is difficult for me to agree with. Many years of experience on these machines has failed to show me that this is the main cause of the magnetized condition of the needles. I believe that the inquirer's trouble is due mainly to the oil which he may be using for lubrication purposes, this oil acting in the same manner as was explained in the quotation given, or possibly the rust preventative oil which is already on the needles as they come from the boxes. If the guides are kept in good condition, smooth, with no possible place where the latches can touch, I really cannot see where magnetized needles would affect the knitting.

If the inquirer's machines are not now equipped, I would suggest that he use mechanical latch openers. These latch openers, when set properly, keep the latches open at all times during the time that no fabric is on the needles, regardless of whether the latches are magnetized or not.

CONTRIBUTOR NO. 4749.

Causes of Stiff and Starchy Silk.

EDITOR COTTON:

I note the question from "CONTRIBUTOR NO. 4728," who wants to know how to prevent stiff and starchy silk, in yarns for full-fashioned manufacture.

The indications are that every silk throwster has his own formula of silk soaking. If you could see all of the different formulae employed by different throwsters, you would probably find that each one contained olive oil, olive oil soap, Neatsfoot oil, glycerine, borax, and some of them tallow, and every one of them would be in varying proportions. In addition to these formulae, there are now many compounded soaking solutions on the market and some of them are extensively used by throwsters.

It is very doubtful to my mind if there is such a thing to be found as a universally satisfactory soaking solution. The character of different lots of raw silk are entirely different, some silk having what is termed as a soft hand, some as a hard hand. The different characteristics should be identified by the throwster and soaking applied to meet the different conditions.

In addition to this, there will hardly be found in any two different hosiery mills exactly the same method of handling the silk preliminary to the knitting operation. At the present time there is much agitation in favor of so-called direct knitting, some throwsters so far advanced in their claims as to recommend that the only necessary preparation is to place the cone on the knitting machine, pass the silk over a wet wick or through an emulsion trough on the back of the machine.

The more conservative of the same school recommend that the cones be placed in a conditioning room of 80 to 85 per cent humidity for a period of 12 to 30 hours prior to being knit and then run over a wet wick on the back of the machine.

In the old school of throwsters and knitters, in which I find myself, is the feeling that the best results will be obtained from a throwster's cone where the soaking solution is hard enough and has tack enough to permit being backwound through a knitting solution, and then conditioned for several hours, without the soak softening enough to become sticky or to peel off in the process of knitting. These problems resolve themselves into questions to be worked out by close cooperation between the throwster and his customer, and it will be necessary for the throwster to study closely conditions at the mill and as far as possible, adapt himself to the required conditions. At the same time, it will be necessary for the mill to adapt itself to the conditions of the throwster. As an example, the throwster might be using a soaking solution which would be all right if tied in with a proper knitting solution, and vice versa.

CONTRIBUTOR NO. 4729.

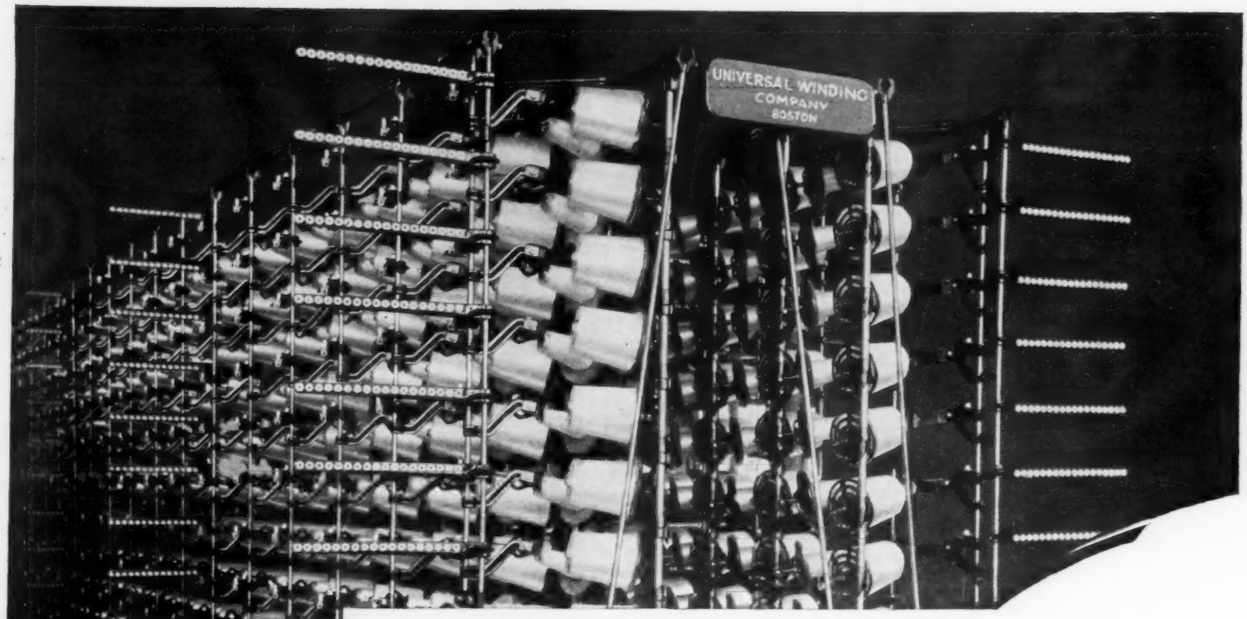
EDITOR COTTON:

Replying to the inquiry as to the causes of stiff and starchy silk, the question is a little vague to me. I gather that the inquirer is selling thrown silk. I would infer from the knitters' complaint that the silk was stiff and starchy due to some loading material to increase the weight or boil-off. The boil-off might run as high as 27 per cent in which case you would get the trouble complained of. The silk could be tested for per cent boil off to settle this question.

There is a natural tendency for a throwster selling thrown silk to run a high boil off. There is nothing the knitter can do to correct a condition of this kind. He can reduce the strength of his backwinding solution or slow down the speed of the moistening roll on his backwinder to reduce the amount of wetting out of the silk and prevent some of the sloughing off of starch, as he calls it.

However, the place to correct the trouble is at the throwster's mill. This is a problem that the knitter and throwster should study and work out between them. The knitter can test out sample lots of different soakings until he finds one that will meet his requirements. If the knitter is buying a thrown silk of a fixed standard soaking, then the silk house should give him the benefit of other customers' experience with the silk and tell him the method most generally used by the knitters using their silk. Personally, I don't like a standard soaking for all mills. This is a problem which should be worked out to suit the individual needs and conditions.

CONTRIBUTOR NO. 4753.



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UNIVERSAL HIGH SPEED RAYON CONE CREELS provide a smooth, overend delivery of yarn from cones, permitting a yarn speed limited only by the maximum speed of the warper — usually from 125 to 150 yards a minute. No abrasion of yarn or straining of fibre occurs as when Rayon is drawn from spools. Universal cones, containing from 1½ to 3 pounds of Rayon furnish an unbroken supply for warping at high speed.

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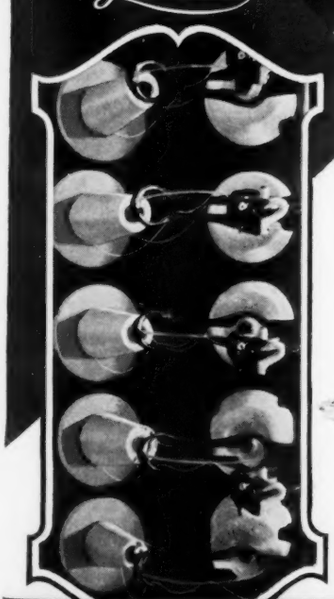
Incidental savings of waste, of expensive spools, and of power and floor space, if rayon is purchased on cones, invite a study of UNIVERSAL HIGH SPEED WARPING applied to your particular problem. UNIVERSAL Creels can be used with sectional or horizontal warpers, and can be equipped for single or magazine cones.



UNIVERSAL WINDING COMPANY
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303

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"Regatta"...beige rayon faille with National's design printed in tones of mahogany brown . . . for the afternoon.
"Slightly Viennese" . . . A National suggestion in pale peach taffeta printed in soft green, corn color and powder blue.
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PROCESSED by National means authentic style . . . smart and modern . . . sure and poised. In the charming designs of National stylists . . . or of your own creation . . . your fabrics achieve that subtle rightness which means profitable and ready sale.

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Paterson, N. J.

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New York Salesroom: 152 Madison Avenue.

Works: Paterson, N. J., East Paterson, N. J., Allentown, Penn., Williamsport, Penn.

Canadian Branches: Dominion Silk Dyeing and Finishing Company, Limited; Dominion Silk Printing, Limited, Drummondville, P. Q., Canada.

The KNIT GOODS MARKETS

DEMAND for American hosiery should be at a peak stage. Ordinarily July and August are the dullest months for manufacturers. That period usually follows one of briskness. It appears traditional lines may not be followed this year. Excepting the juvenile division, hosiery is not showing that activity which for years has prevailed in the emergence from the unsettled weather of the first half of spring to the entrance into the summer months. There is seen the likelihood this year of a reversal of the bright and dull spots in the markets for the first six months.

Lack of demand for slik hosiery in May could be attributed to a confused state of the primary and retail markets due to efforts to effect radical style changes—a widespread wish that the dull finish might be made to displace the lustrous which has held sway since silk became the aristocrat of fibers for the very sheen which now is, so suddenly, declared to be not so desirable.

Contingent on the extent to which the dull finish shall be accepted by woman, the exploiting of dull finish silk stockings should have the effect of improving the situation for two classes of manufacturers. Those providing the really meritorious types of the dull should be able to obtain profits, instead of sending their product into distribution on a markup on actual cost of producing so slight as to leave as the only incentive to go ahead the pleasure that comes from gratifying an ambition. Those who continue making stockings to be sold at popular prices—around one dollar a pair and up to $1.50—should have that field more to themselves. Expansion in dull finish will, for a time, probably proceed on a more reckless scale than that in the lustrous.

"If it's dull finish the trade wants, why not fine gauge lisle?" ask some elements not so strongly impressed with the proposal for a leap from silk with its natural sheen that has stood fashion's test for more years than most of the present full fashioned manufacturers have been connected with the industry, into a future which will be dominated by woman's whims. "How long is this thing going to last?" ask the dubious. "What will happen to stocks of dull finish if it pass out?" as have many innovations in quite recent years, more notably the knee-length stocking of only a few seasons ago and more recently the black heel, is a question that is in the minds of mills selling directly to retailers and carrying stocks for them while maintaining a 24-hour delivery service.

There are at least ten colors in which silk hosiery with the sheen are sold for current and nearby deliveries. As many more will be required for the dull, in the opinion of manufacturers. In other words, mills making both the dull and the lustrous would needs carry practically twice as many numbers as at present—and most buyers unable to detail sizes and colors more than a week or two in advance of delivery. Jobbers demand a service that implies express and air mail shipment of small quantities. That even is too slow for many small retailers and some quite pretentious department stores.

Confusion may retard normal trading in hosiery although business conditions generally be on the up grade and the situation in hosiery fundamentally sound.

The sales manager of one of the better known and more successful manufacturers of silk and rayon hosiery and underwear sold direct to retailers was asked why the flare of interest in dull finish stockings. "For increasing sales," he replied. He was concerned with only the grenadine twist, ignoring entirely chemically produced dullness and not much interested in crepe twist. As defined by this director of sales and close student of about everything from Genesis to Revelations in the manufacture and distribution of fine hosiery, crepe stockings would be a fashion item, while grenadine "will be a year-around staple."

Accepting this proposal, there already are at least two types of dull finish hosiery, leaving out of consideration that which has been chemically delustered. But, as at present indicated, the volume production will be of grenadine, and crepe occupies a field probably as restricted as that for ingrain silk stockings, which, by the way, have lost much of their popularity and would seem to be menaced with an almost virtual extinction by the dull—the very antithesis of ingrain.

At least two ingrain mills in Philadelphia dropped out of that group in the last year or two. Both are reported to have quit with considerably less of liquid assets than when they started. But there will continue need for some retail stores to carry ingrain silk stockings in their stocks, which also will embrace dip-dyed lustrous and at least one type of dull finish—assuming the latter shall measure up to the expectations of its promoters.

Viewed in its best light, the hosiery market is in a confused state, a condition which may prove to have been the beginning of a new and more prosperous era for manufacturers. None of the varieties of dull was originated or introduced at the behest of woman. The thing now is to have woman adopt what manufacturers originated for supplying what retailers have been calling for—style changes, something different. Single-point heels, French heels and picot, rated among the stronger talking points for years, became commonplace in the minds of hosiery department managers ascribing their less profitable showings to anything other than their own shortcomings or the shifting of shopping centers. And now these buyers have brought to their attention more variety than they know what to do with. As recently as two weeks ago, a department store here and there, it was learned, had made no commitments for any of the newest types of women's silk stockings. Manufacturers do the experimenting and carry the stock.

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Representatives in All the Principal Countries of the World

New Numbers by Hosiery Guild; Advertising Campaign is Planned

HOSIERY GUILD, INC., whose members manufacture "Guildmode" hosiery, met on Monday of Show Week at Philadelphia, with D. L. Galbraith, president, in the chair. It was decided to add four new numbers to the previous range—including a 340-needle three-thread all-over silk number, and three crepe silk styles of 300-, 320- and 340-needle, four thread construction. It was also decided to initiate an advertising campaign on the lines produced by member mills.

G. L. Westcott, president of the Westcott Hosiery Mills, Dalton, Ga., was made a member of the executive committee, succeeding Thomas W. Buck, of Philadelphia, resigned.

Obviously hosiery of grenadine will fetch more money than that knitted of tram silk. It must, from the nature of its construction, and will, because an innovation. But, it is pointed out in the trade, there is no assurance that in the keen competition that is to follow, prices for grenadine will not recede from present levels, and it is to be expected competition among manufacturers will increase for a time, until, perhaps, the profits figured at the outset of the new era in hosiery will be pretty nearly as thin as the present margin on lines which have been staple during the muddled conditions which became pronounced around the beginning of Fall last year.

Hesitancy to put dull finish hosiery in stock is one explanation for the confusion in the markets.

The Harron Hosiery Mills, Philadelphia, recently announced to the trade that it had perfected a crepe number. The company's description of this innovation states the silk yarn is twisted 70 turns in one direction, then 70 in the other, and then given five turns. The company is careful to say in a statement to retailers that this is "genuine pure thread silk crepe, not grenadine, and the silk not subjected to any form of treatment for delustering." The stocking is designed to fetch $1.95 a pair at the retail counter.

It has been suggested that descriptions such as the Harron mill, making Blue Heron brand stockings, mark the beginning of more confusion for retailers than many of them have contemplated. In the first place, it is pointed out, as manufacturers advertise one type or another, shoppers may be prone to ask "Is this crepe?" "Is this grenadine?" or "are you sure this is not delustered silk?" etc.

It is recalled that about two years ago the young woman who presides as head of the domestic science department of the University of Chicago got herself a place in the limelight by saying in a trade publication that women had no means of knowing what kind of stockings they were buying and might be paying 45-gauge prices for 39-gauge hosiery, etc. She wanted the manufacturers and stores to state the gauge and necessarily this was followed by a suggestion that shoppers be told also how many courses were knitted into each kind of stocking they were examining at the counter. A few mills since have been stamping "45-gauge" on the stockings they produce and print a guarantee on the rider ticket that this is correct. It is noted, however, that hosiery not marked as to gauge, courses, grade of silk, and so on, but left to the judgment of shoppers, represents the volume business. As is pointed out, a girl who paid $3.95 for a pair of ingrain 51-gauge two thread silk and found it wearing no longer than a pair of 42-gauge which she bought without specifications and for which she paid $1.25, is not likely to be much impressed with the minutia of construction as advocated by the domestic science goddess for passing along to women and girls buying stockings by their own yardstick, instead of that of some shopping efficiency expert who simply may have been engaged to supply propaganda for some shrewd factor.

Southern Mill Originates Crepe Hose After Two Years of Experimentation

THE WESTCOTT HOSIERY MILLS, Dalton, Ga., makes and sells hosiery—not gauge, as was made plain by David H. Young, head of the company's research department, in a chat during the recent Knitting Arts Exhibition, where he was an observant visitor. Mr. Young experimented two years or more with crepe hosiery before the company was willing to put all of its ten types of "fabrimode" hosiery into the picture of its line. He sought more than a permanent dull finish, which, he states, was the easier problem of several which he had set out to solve, and now, he stated, "we have chiffon tweeds, crepe net and chiffon crepe, besides a silk voile effect in our full-fashioned number. And have developed in our laboratory tropical tans for every complexion and sunburn; tweed for both knitted and woven fabric; a powder blue shade for every type of evening dress," and, Mr. Young added, by way of emphasizing his belief that the company's lines and merchandising methods have won public approval, "the plant has been operating night and day since December last."

In answer to direct questions as to the need for minute descriptions of constructions for merchants to pass to their customers, Mr. Young instanced that if he obtained the better results from 45-gauge machines for certain types of stockings and from 39- or 42-gauge for others, neither merchant nor shopper would be interested in the machine, so long as the product proved a satisfactory and profitable seller.

The organizer and executive manager of the Berger hosiery shops, a chain of ten or a dozen stores well known to an element of the Philadelphia shopping fraternity, for several years maintained a $1.15 price as his minimum. Some months ago "15" disappeared from the price ticket. The executive was asked whether he found it necessary to adapt a different form of construction to that price. He replied: "We never sold gauge; always hosiery, and that is what we shall continue to sell."

This chain necessarily has to meet a wider competition since so many of the department and single unit stores are selling dollar stockings, some having special sales of hosiery at $1.15 said to be marked down from $1.65 and $1.95 a pair, on the ground they represented discontinued numbers, of which there always are very large quantities when prices are sagging under excess production. It is noted also that large

department stores manage to locate enormous stocks of "irregulars" of well known brands, for irregular price sales. Often these irregulars are virtually free from imperfections, from which shoppers sometimes deduce they are getting first grade at about the price of "seconds."

Low Price Silks Hit Rayon Hose.

The primary markets for some time have been flooded with so-called irregulars, available for prices so low as to make it harder to sell popular price rayons of first grade. There is and for some time has been an unusual demand from certain department stores for irregulars of brands nationally advertised to consumers. The irregulars of one leading full-fashioned mill distributing through retailers direct were on sale in May for $1.18 a pair. They bore the mill's name and the mark "irregular," and the selling was brisk. During this sale the store had irregulars so marked but not branded as to maker, and these were priced 63 cents a pair. They were not so good a stocking as the branded, but the department manager doubted whether the latter, had they not carried the mill name, would have moved any more freely had they been mixed up with the 63 cent off-grades and tagged with the same price. Unidentified seconds and irregulars are in good call, but for very low prices only.

Drop in Seamless Production Ignored by Guildmode Group

WHILE, it is stated, low price silk stockings are butting into sales of seamless rayons, there appears good ground for believing Bemberg and various forms of rayon in full fashioned construction are moving ahead in point of production. The Department of Commerce production report for March is interesting in this connection, showing as it does that identical mills in that month turned off 198,886 dozens, comparing with 82,918 dozens in the corresponding month of 1929, an increase of 115,968 dozens, while full-fashioned silk output of identical manufacturers in the same months declined by 132,105 dozens.

The heavier decline in seamless hosiery in March was in silk and rayon in combination, the drop being 77 per cent from the corresponding month of last year, while for the same months the falling off in full-fashioned silk-rayon was 24 per cent. The gain in full-fashioned rayon can, of course, be accredited largely to Bemberg, a fiber which promises to make further gains since it is being made in chiffon weights.

Of special significance at this time in the production figures for March, 1930 and 1929 is the reported drop of 41 per cent from last year in output of seamless hosiery as a class. This is not, however, causing any uneasiness to those interested deeply in the organized movement for standardizing circular knit and giving it a more prominent place in hosiery commerce.

Hosiery Guild, Inc., organized less than a year ago and having strong support from several southern mills, at the close of the recent Knitting Arts Exhibition had 12 members, it was stated by Harry L. Kinne, the managing director, who reported an unexpected number of manufacturers seeking detailed information of membership. The Guild is giving much attention to the pushing of the true seamless construction of Guildmode hosiery—that is, the plain back stocking. It is steadily although slowly moving into distribution and across the counters of some of the better retail stores, its progress being retarded, obviously, by the fact that it is a "seamless" stocking and is priced as high as 48-gauge picot top stockings from flat machines of some well known mills.

The entrance of strongly backed circular knit silk crepe stockings in this seasons' markets is but another incident in the confusion in the trade; causing manufacturers to seriously contemplate the need for holding production down to demand as indicated from time to time as style changes take on an important aspect. Necessarily there is much interest in the problem of putting a high price seamless across in displacing low price full-fashioned, although admittedly of lower quality, perhaps.

The prediction was made by the American representative of a popular full-fashioned hosiery machine coming from Germany that the well balanced American mills would aim at a distribution of approximately 50 per cent of 42-gauge machines, as the more pliable; 25 per cent of 45-gauge and 25 per cent of all finer gauges combined. It was pointed out the 42-gauge is better adapted to medium service weight silk hose and ideal for popular price chiffons. But there will be only restricted installation this year, is the opinion of all of the full-fashioned machine builders, some estimating it will be less than 50 per cent of that of 1929. This is one of the more encouraging forecasts from persons who may be assumed to know whereof they speak.

At the rate full fashioned output is being curtailed and that of seamless is falling off, it is coming to be realized that only a modest spurt in consumptive demand would be needed to lift full-fashioned out of the rut it got into by reason of over expansion, and that as hangover stocks go into distribution and buyers for the big stores are forced to abandon the notion they can dictate prices, demand may dominate for a period while idle plants are getting into action for the fall campaign. Most large operators who have openly expressed an opinion of the further duration of the existing confusion see nothing especially encouraging until after the summer languor wears away. From the fact some mills are operating to absolute capacity and turning away orders calling for very nearby delivery, it is to be assumed that the first step in the turn for the better has been taken.

The Weinerth Knitting and Machine Co., Reading, Pa., for some time has been and still is operating its 300-needle machines continuously, with no stop Sundays or evenings. This is an exclusively seamless plant, and there is a considerable battery of 300-needle equipment. The company states it could accommodate quite a bit more business, for its 260-needle machines. It still is producing lustrous silk stockings but has done some experimenting with 340 needle dull finish. None of the full-fashioned mills in Pennsylvania is reported matching the Weinerth seamless for production per unit, although several are on full time single

shift schedules, mostly small plants making 8-thread and 7-thread silk with mercerized hem.

According to some leading hosiery manufacturers from the South who were encountered at the Knitting Arts Exhibition, mills there as a class are producing around 60 per cent of capacity, and it is stated by a North Carolina mill executive that southern manufacturers are "getting appreciably higher prices for silk full-fashioned than most of their rivals in the Philadelphia-Reading area," of which several Philadelphians said in an interview, "that seems to be true."

Juvenile Lines Busiest Group in the U. S. Hosiery Industry

AS IN THE NORTH, there are in the South a number of seamless mills which are better situated in matter of orders than are the full-fashioned, this being the case especially as to those specializing in children's hosiery. In fact, it appears from reports of manufacturers in various sections that juvenile lines are the more active group of the hosiery industry. R. C. Aycock, the Aycock Hosiery Mills, South Pittsburg, Tenn., reports running full against orders for July deliveries. The mill is credited with having a good outlet in the David Jacobs Corporation, New York. David Jacobs for some years had associated with him actively Ralph T. Edwards, who more recently has been successfully directing sales for the Charlotte Knitting Co., Charlotte, N. C., and is finding a good market for the company's full-fashioned line of women's silk.

Four months production sold and the plant operating seven nights and six days a week is the report from the Belle Meade Hosiery Mills, Nashville, Tenn., production sold through Sutton & Vande Water, New York. This is another of the better known mills devoted to children's hose. Two in the North in the same category are the Pilling & Madeley Mill in Philadelphia and the Schuylkill Hosiery Mills in Reading. Both are sold well ahead, through Shreve & Adams, one of the old time New York selling agents, and both are managed by experts in the perfecting of machine attachments for producing unlimited patterns.

Frank W. Robinson, the genius of the Schuylkill mill, formerly was associated with the Nolde & Horst Co., in Reading, where also he originated pattern devices. He is just coming on the market with a distinctive line of men's fancy half-hose, to sell for one dollar a pair. They are of silk and rayon and said to represent an innovation in color combinations. Mr. Robinson goes on the theory the market is over-well supplied with low price fancy half-hose and marvels at some of the patterns he has seen to sell for 25 cents a pair and found in chain stores for 10 cents a leg. His line of fancies will embrace no numbers to sell for less than a dollar.

It is feared the infants' sock season is not closing as well for some of the manufacturers as was to be expected. There are instances of several mills with new equipment, especially adapted to the modern in construction, failing to get enough business to come out whole. To one on the side lines it looks as if the executives of these several mills are to blame for their

Quissett Mill
New Bedford, Mass.

COTTON YARNS

RASH PROMISES and various claims of one sort or another may land occasional yarn orders—but business that repeats of its own accord results from quality and uniformity.

The quality and uniformity of Quissett is evidenced through the predominance of this brand on current specification sheets. A predominance that has enjoyed consistent growth through its years of progressive, dependable service.

Carded and Combed Yarns in all Numbers and Descriptions.

Ply Yarns our Specialty.

Egyptians, Sea Island, Peelers, Sakelarides, Pimas, Peruvians and Quitex.

QUISSETT MEANS QUALITY

Wm. M. Butler, Pres.
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unprofitable season, in not effecting the proper selling hookup. A mill head may drive a selling agent but cannot force him to sell, and it is found that it is as easy a matter for a selling agent to annex a desirable mill account as it is for a manufacturer to find the right kind of outlet. At least two good sock lines are understood to have been so disappointing to their respective sponsors that the latter are about ready to get out of business—this according to their own utterances. But even for the better organized concerns, the infants socks markets have left out much that it is too late to supply during the current season just ending.

Some Mills Drop Rayon Underwear; Broader Interest Seen in Women's Cottons

THREE MANUFACTURERS who discontinued making women's rayon underwear in the last few months can be accounted for. How many more have done likewise must be left to conjecture. They gave up because unwilling to cheapen their lines in order to cope with makers of sub-standards for which retailer price-buyers may be held responsible. Most of the cheap stuff is, of course, made in small establishments equipped with a cutter or two and a few sewing machines; the fabric is very much sub-standard to begin with, and the garments skimped in sizes. Dealers hardly get what they pay for when they take these home-made rayon underthings and the consumer gets even less. Some of the stuff is said to be sold by weight to large distributors. It has given a bad name to even good rayon underwear and narrowed the market for the latter.

Since fine count rayon has undergone a radical reduction in price, it is thought in manufacturing circles there will be a revival of interest in the manufacture of high grade fine gauge fabric and that its use for a time will be limited to the better element among manufacturers. In fact the Wildman Manufacturing Co., whose type of underwear machines is adapted especially to knitting up rayon, already has had a number of inquiries for its 34-cut equipment, this being one of the developments since the reduction in the prices of fine count rayon yarn. But those who have been schooled in the production of rayon underwear may be expected to proceed slowly with the turning off of garments of finer gauge cloth, for the markets are over-supplied with rayon underwear, for men and women, and there are reported some extensive holdings to be sacrificed before there will be much improvement in opportunity for the really meritorious, aside from branded intensively advertised lines of nationally known makers. Some very recent demonstrations of uses for Bemberg would seem to carry assurance of increasing popularity for that fabric for underwear.

Casual statements by several of the more important manufacturers of women's cotton underwear make it appear that cottons are not only losing no ground, but actually are making gains. Three mills—two in Pennsylvania and one in a southern state—might be mentioned as having sold more vests and bloomers for the current season than in 1929, and well supplied with business for fall. The picking up in their business has been in the finer types, with trim that makes an appeal.

Cotton underwear for women still can be sold, say distributors, notwithstanding the popularity of silk and rayon, but it has got to be something more than mere cotton fabric shaped into garments—must represent the deft touch of the stylist and present something outstanding in the way of features that appeal to women—to buyers who are able to vision woman's preference. The manufacturer who assumes he knows it all is likely to miss a great deal that is building up a rival's business. "Cotton underwear is a safer proposition than rayon," said a manufacturer making women's lines from both fabrics, "and will be increasingly safer if stores continue to disgust women with cheap rayons. But it's almost like a new business, and a manufacturer of cottons ought to have the advice of persons who can suggest niceties in styling."

Men's Light Weights Lag.

The period of distribution of men's light weight underwear for the current season is almost ended, yet it seems jobbers and retailers have bought far less than their usual allotments, according to statements of some of the more important manufacturers selling to jobbers. A few mills, specializing in the more dainty in men's lines, report "eminent satisfaction" with the business of the season, so far as it has run. Where intensive selling methods are employed, there appears a virtually normal amount of business on the books of shippers. Mills in this group may constitute so large part of the distributing element that there remains not a great deal for the rest. The men's light weight season has, at any rate, been unsatisfactory to a majority of the manufacturers, and these include some large concerns. There is a good run on men's knitted athletic shirts. As to drawers, there seems such a diversification of styles and fabrics that it is difficult to visualize the volume of business that may have been taken, from the unofficial reports of mill executives. But the situation is said to be not nearly so unsatisfactory as in heavy weights.

Reports coming from mills in the latter part of May were to the effect jobbers, with very few exceptions, had anticipated no more than 20 per cent of their requirements for Fall. They seem to have overlooked the severe curtailment by manufacturers. The indicated decline in production for the heavy weight manufacturing season to April was in the neighborhood of 14 per cent, making comparison with the corresponding period of last year. There was little improvement in buyer attitude in May, and it is understood manufacturers have made no increase of moment in outturn and purpose standing pat on price for the remainder of the year.

No one in the trade doubts that if jobbers will require within 10 per cent as much of men's heavy weight cotton ribbed union suits and shirts and drawers as they used in 1929, there will be a scarcity, for it seems a certainty mills will make up no stock. Jobbers are said to be influenced to hold off with commitments by fear of lower cotton when the new crop comes on the market. They are not favorably impressed by the disparity in May and October cotton

Full-Fashioned Group Elects.

DURING the Knitting Arts Exhibition in Philadelphia, the Full Fashioned Hosiery Manufacturers of America held its annual meeting, and elected S. E. Summerfield, president of the Gotham Silk Hosiery Co., as president to succeed himself. The organization has more than 40 members, it was announced, representing some 57 mills.

Joseph H. Haines, Jr., Haines Hosiery Co., Philadelphia, was made vice-president; Leo Propper is treasurer, and Samuel Rubin is secretary of this organization.

futures.

And it does not look encouraging for more than a 75 per cent of last year's production of cotton ribbed underwear. Fleeced cotton underwear is said to be in even a worse situation, so far as prospect of anything like normal shipments is concerned.

Guaranteed Prices Unsatisfactory for Knitted Outerwear Trades

THERE is fear that the sweater trades will enter upon their summer season in a somewhat demoralized condition, due chiefly to sharp declines in worsted yarns. It seems that of the three major divisions of the knit goods industry, outerwear has suffered the most from troubles within the ranks of the manufacturers. Mill heads themselves tell of unfair practices. withering competition and willful cheapening of products.

The organized knitted outerwear trades had a trade conference some time back with the Federal Trade Commission, which since has announced rules for trade government. The manufacturers do not take kindly to some of the rules, as they leave much opportunity for unfair competition, and their organization is to take some form of action on them at its convention after the middle of June, when, it is expected, definite action will be taken as to opening dates for bathing suits and for sweaters.

Bathing suit mills have had a fairly good season, but the repeat orders have fallen short of expectations. There have been some order cancellations, because of declines in worsted yarn rates, and some few jobbers returned goods when manufacturers refused to rebate invoice values. Sweater mills have had some experiences of this kind, but have the real perplexities of a falling market ahead of them.

Beginning with the openings of their lines last year, knitted outerwear manufacturers bought worsted yarns on a price protection basis. That is, spinners guaranteed them against declines. Yarns have had a drop of fifteen to twenty cents a pound. Distributors of finished goods, knowing of this arrangement, also procured price protection, in many instances, and took it in others—or are trying to obtain reductions in their invoices equivalent to what manufacturers may have saved in the declines in yarns. They usually ask more. A common request is for a 10 per cent rebate. Yarn declines amount to about that, but manufacturers have a higher overhead by reason of operating only part time and in a jerky way at that, and therefore are in something of a plight, facing demand but unwilling to make up for stock, and working against orders for only the better accounts.

Stronger Yarn Makes Fewer Seconds

YARN that is stronger than the accepted standard makes better wearing goods.

Freedom from slubs or weak stretches reduces break , irregularities or defects to the minimum,—and reduces the number of seconds.

Standard Yarn, spun and mercerized in our own plants to our own specifications, assures you smooth, strong, lusterful yarn.

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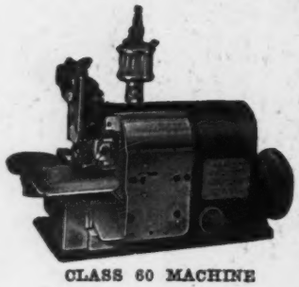

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INQUIRE ABOUT NEW MERROW MACHINES

STYLES 60-ABB and 60-D3B

For simultaneously trimming and joining ends of cotton, silk or woolen piece goods with a

FLAT BUTTED SEAM

Permits goods to pass through finishing machines, uninterrupted, for such operations as Shearing, Calendering, Mercerizing, Bleaching, Dyeing and Printing—with *remarkable saving*—both in labor and fabric.

Butted Seam, natural size, made by STYLE 60 ABB MACHINE on Cotton Goods which have been subsequently processed. The STYLE 60 D3B makes a similar though much wider seam designed for use on sleazy or loosely woven goods to insure holding.

OTHER RECENT DEVELOPMENTS—FOR THE RAYON TRADE

STYLE 60 RD —For a three-thread overedge finish, either straight or scalloped, on Rayon Bedspreads and other sleazy articles on which the ordinary edge finish will not hold.

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Let Us Demonstrate the Work of These and Other Machines on Your Own Fabric.

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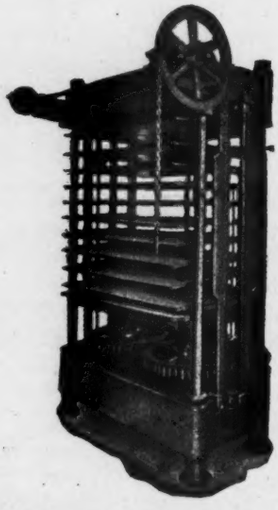

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Hot Plate Screw Press
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Letters from an Old Knitter to His Son

Dear Son:

Since you were not able to attend the Knitting Arts Exhibition at Philadelphia, I will endeavor to give you the benefit of some of the impressions I got from the meeting.

The exhibits were artfully displayed, while the abundance of cut flowers and potted plants contributed much of beauty to the surroundings. It was the same show with another year of progress added to make it bigger and better.

The thing, however, that impressed me most, was the spirit of the meeting. There is nothing that cements a family, a community or a nation, more than misfortune or adversity. The trials and privations of war have tempered the souls of men to build greater nations. So I can begin to see the same principle at work in the hosiery business. Out of the depression which we are now passing through there is a more sympathetic and cooperative spirit developing among manufacturers; also between employer and employee. The braggadocio spirit was conspicuous by its absence. There was a noticeable disposition on the part of some of the big boys to sit down and talk things over with some of the little fellows, and to do more silent listening than noisy talking. I saw signs of more honest-to-goodness thinking than I have ever seen at a former show.

There was also less of the sectional spirit in evidence. The northern manufacturer recognizes that he has a worthy competitor in his southern and western neighbors, and the salvation of any section depends on the salvation of the whole.

With this spirit much good is to come out of this seeming chaotic condition in which we find ourselves just now, and we are laying the foundation on a secure cooperative basis that will make more lasting the progress and prosperity of the future.

When you have an opportunity, run by to see me and we will talk things over. I have much to talk about, but very little to say today, and I will hang up for this time.

With love and best wishes, I remain,

DAD.

THE school for training full-fashioned hosiery mill operatives, maintained by the Ajax Hosiery Mills, Phoenixville, Pa., has been accorded recognition by the Federal Education Department and the Pennsylvania State Board of Education.

VOGUE Silk Hosiery Mill, Philadelphia, recently installed a full-fashioned machine with a 15-inch head for knitting feather fashion stockings of fine gauge.

MODERN Hosiery Mill, Philadelphia, with two sets of full-fashioned machines of 45-gauge will be in production in June, the owners state. It has been ready for starting for some weeks.

C. D. H. PRUSSING, Reading, who is erecting a full-fashioned hosiery mill at West Chester, near Philadelphia, states he expects to have two sets of machines in operation in July, but at last account was undecided whether to install 45- or 42-gauge.

Who else wants **QUICKER** *box service*

From our 5 SOUTHERN PLANTS

Right in the heart of the Southern textile district are five centrally located Old Dominion box plants, to give you quicker service, lower freight rates and quality boxes that stand second to none. We are the largest producers of paper boxes in our particular line in the United States and are in position to fill your requirements for boxes with special design wraps on short notice. Let us quote you on your next order, there is no obligation.

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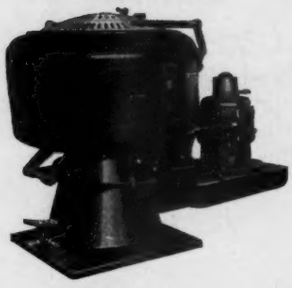

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FOR treating rayon—for removing soaking solution from pure silk—for small lots of skeins—for hosiery or piece goods—you'll always find the American Underdriven Extractor ready for the job. Six basket sizes for loads of from 20 to 75 pounds. Write.

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Automatic **STEEL STOOLS** *Adjustable*

All steel construction . . . automatic locking device for adjustment of height . . . optional back and footrest . . . choice of 20 models . . . moderate prices . . . exclusive features of Vitek, America's finest seating equipment! Ideal for offices, mills, drafting rooms! Solves seating problems permanently!

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Making Cotton Cloth to Withstand Laundering

No longer are color fading determinations left to guesswork. Launder-Ometer furnishes accurate information whereby it is possible to manufacture cotton cloth or any other fabric to specified standards for color fading and wear under the action of the commercial laundry. Two hours in Launder-Ometer is equivalent to twenty trips to the laundry and gives pre-knowledge of what to expect. Safeguard buying, selling, and manufacture with this standardized machine for washing tests. There are many other uses for Launder-Ometer of which we will gladly give you detailed information.

And Sun Fading

For more than a decade Fade-Ometer has been foretelling, speedily and dependably, what sunlight will do to color in cotton cloth. Today this method of measurement finds world wide application. 45 Fade-Ometer hours is equivalent to a month of June sunlight.

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MANUFACTURERS OF
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Among the Knitting Mills

THE ADDITION to the Bossong Hosiery Mills, Inc., Asheboro, N. C., will be completed and installation of machinery will take place around the middle of August. The addition is to double the capacity of the plant, and only 45-gauge hosiery will be manufactured then, as is the policy of the company now.

Reconstruction plans for the portion of the Perfection Hosiery Mills, Inc., Burlington, N. C., which was recently destroyed by fire are now underway.

Robbins Knitting Co., High Point, N. C., recently moved in their new three-story brick building, which is located on the lot adjoining its former plant. It is equipped with 225 circular machines.

Knit Products Corp., Belmont, N. C., have completed their plant at a cost of $40,000, which with machinery, amounts to an expenditure of $150,000. Their output will be about 6,500 pairs of hose per month. There are 15 machines for the manufacture of women's full-fashioned hosiery.

Another hosiery mill, to be located in the Russell Building, is to be started in Graham, N. C. Some of the machines were scheduled to arrive during the month of May. The mill will manufacture a special class of fine hosiery.

Marion Knitting Mills, Marion, N. C., have announced that they will double their capacity by installing additional equipment.

Hanes Hosiery Mills Co., Winston Salem, N. C., have awarded contract for complete ventilating and cooling system for their boarding room.

Superior Hosiery Mills, Lexington, N. C., have completed the construction of their new boiler house and installed a new furnace. A new addition, to be used as a dye house, was also recently completed.

Mount Airy Knitting Co., Inc., Mount Airy, N. C., manufacturers of underwear for both children and adults, have acquired additional space and purchased 45 new sewing machines and 28 new knitting machines in order to double their capacity. As soon as the additional machinery has been installed 100 employees will be added.

Rock Hill Hosiery Co., Rock Hill, N. C., and Industrial Committee of the Chamber of Commerce are negotiating plans for tripling the size of the building, at a cost of $30,000, and adding new machinery, at a cost of $200,000.

New machinery is being installed at the Alabama Hosiery Mills, Inc., Decatur, Ala., which recently merged with Knit Goods Corp. of America. A number of new workers will be employed to take care of the increased production.

It was recently announced that 25 additional machines for the manufacture of infants' socks with Fidelity ribbed tops are being installed at Pilot Hosiery Mills, Asheboro, N. C.

Hartford Knitting Co., Dyersburg, Tenn., are planning to manufacture hosiery in the American Cigar Co. building in Dyersburg.

Shuford Hosiery Mills, Inc., Hickory, N. C., which recently took over the Conover (N. C.) Knitting Co., and the Longview Hosiery Mills, of Hickory, N. C., have completed construction of a two-story brick and concrete building with annex for dye house. W. H. Shuford is president.

A THIRD organization of hosiery mill heads, the Association of Ingrain Hosiery Manufacturers, was formed a few weeks ago, with Leo Propper, of the Propper-McCallum Hosiery Co., president, a company which it was stated by an executive probably would put a line of dull finish stockings on the market. While the new organization is intended to preserve the ingrain industry, its members may bid for a part of the business in dull surface silk. The idea is to promote continued use of the very lustrious while missing no opportunity to supply the very dull.

BONE-DRY UNSHRINKABLE WELL-FINISHED

HARD MAPLE HOSIERY BOARDS

Give you that much desired finish that cannot be obtained from any other than wooden boards.

You get the length, lustre, *feel* that the goods should have.

Our special finish is highly recommended for silk and wooden boards.

We serve the best mills—send a request for list and same will be forthcoming.

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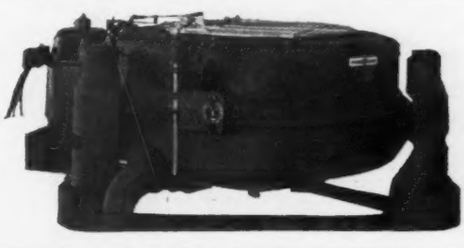

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The YARN MARKET

Philadelphia, Pa., May 17th, 1930.

A RESUME of last month's report will reveal that the yarn market endured one of the quietest periods experienced in some time. There were several pronounced rallies in cotton quotations, but these seemed to stimulate neither yarn prices nor yarn sales. In other words, the yarn market was totally unaffected by the price of the raw product during the past month.

During the first part of the present report period, which begins with the week of April 14th, it seemed that many were of the opinion that curtailment among spinners had not been as drastic as they pretended. However, a large number of yarn dealers, who are usually well informed of spinner's operations, stated that they believed curtailment among spinners had been rather rigidly adhered to.

It was also pointed out that cotton manufacturers in the Philadelphia district were being very cautious about increasing their plant operations. The majority of mills in that section were running less than 70 per cent of normal capacity, and it was the belief of many that this would continue for some time. Excessive curtailment of carded yarn spindles was deemed necessary.

Business continued unusually quiet during the next week and there were no indications pointing to any immediate increase, April, as a whole, was a rather disappointing month, but it was hoped that the Knitting Arts Exhibition of the National Hosiery & Underwear Manufacturers' Association, to be held in Philadelphia on May 12th, would aid in lifting some of the depression from the month of May. It was reported during the week that spinners' asking prices on carded weaving yarns were from 1 1-2 to 2 cents a pound above that of local sellers.

During the next week there was a slight increase in inquiries for coarse and medium counts of carded weaving yarns. Competition for this small amount of business was so keen, however, that prices dropped to the same level that existed when cotton was 14 cents a pound. Most dealers stated that their customers seem to be exerting no desire whatsoever to buy. They seemed absolutely contented to wait, or purchase just what they needed to get by with.

Spinners asking prices for the past month have remained unusually stable. The major portion of spinners were asking from 1 to 2 cents a pound more for their yarns than prices quoted by dealers. Yarns dealers stated that most spinners were booking just as little business as possible, due to the fact that they felt their curtailment should be intensified.

Based upon the assumption that any change would have to be for the better, both dealers and representatives of spinners, prophesied an increased movement in carded and combed yarns before the end of May. They said that when any market had descended into the depths experienced by the yarn market since Jan. 1, that recovery within a reasonable length of time was inevitable.

During the next week local yarn houses expressed their belief that the condition of their principal customers was gradually improving. They also expressed complete satisfaction with the credit situation, as existing at that time. Yarn houses and spinners should be commended for the absence of large losses, as they made a careful survey of credits as far back as October.

During the next week rather keen competition existed for the small amount of business that was transacted. There was a general tendency prevalent to cut prices, especially prices of knitting yarns. This was not looked upon very favorably, as it was the opinion of many that what the public needed most to get it to buy was the assurance that prices would not be reduced the week after buying had taken place.

Philadelphia prices on May 17th follow:

Single Skeins.

4s to 8s	24 @24½	10s	25
12s	25½	14s	26
16s	26½	20s	27½
24s	30	26s	31
30s	33		

Single Warps.

10s	25½	12s	26
14s	26½	16s	27
20s	28½	26s	32½
30s	33½ @34	8s	25 @25½
10s	25½ @26	12s	26 @26½
14s	27		

Two-Ply Skeins.

16s	28	20s	28½ @29
24s	31 @31½	26s	32 @32½
30s	33½ @34	40s	41

Two-Ply Warps.

10s	26½	12s	27
14s	28	16s	28
20s	29½	24s	32
26s	33	30s	34 @34½
40s	42		

Frame Spun Carded Yarn on Cones—Cotton Hosiery Yarn.

8s	25	10s	25 @25½
12s	25½	14s	26
16s	26½ @27	18s	27½
20s	27½ @28	22s	29
24s	29½	26s	31
30s	33	40s	40 @36
30s dbl. carded	36 @37	30s tying in	32

Carpet Yarns.

8s and 9s white warp twist	24
8s tinged tubes	22
8s part waste	20

Two-Ply Combed Peeler Skeins and Warps.

8s to 16s	41	20s	43 @44
24s	44 @46	30s	47 @49
40s	52	50s	55
60s	62	70s	72
80s	84		

Single Combed Peeler Yarn on Cones.

18s	38½ @39	24s	42 @42½
30s	46½ @47	36s	48½
38s	49½	40s	50½
50s	55	60s	62
70s	72	80s	84

Single Mercerized Yarns.

30s	77	36s	78½
40s	80	45s	84
50s	87	60s	94
70s	1.10	80s	1.32
90s	1.75	100s	2.05

Mule Spun Carded Yarn on Cones.

10s	31	12s	31½
14s	32	16s	32½
18s	33	20s	33½
24s	36½	26s	37
30s	38	40s	45

Mule Spun Combed Peeler Yarn on Cones.

10s	39	12s	40
14s	41	16s	42
18s	43	20s	45
22s	46	26s	47
28s	48	30s	49
36s	52	38s	54
40s	55		